

PUBLIC HEALTH REPORTS

VOL. 31

JULY 21, 1916

No. 29

JURISDICTION OF MUNICIPAL BOARD OF HEALTH.

CITY HEALTH REGULATIONS INTENDED TO GOVERN CONDITIONS OUTSIDE THE CITY ARE VOID.

The board of health of the city of St. Paul, Nebr., adopted a regulation making it unlawful to maintain a slaughterhouse within 130 rods outside the city limits.

A prosecution was brought under the regulation, but the Supreme Court of Nebraska decided that the regulation was void as being beyond the powers conferred upon the city board of health by the State law.

The opinion is published in this issue of the Public Health Reports, page 1949.

HAY FEVER AND ITS PREVENTION.

By W. SCHEPPEGRELL, M. D., President American Hay-Fever-Prevention Association, New Orleans, La

The symptoms of hay fever in the early stage resemble those of an incipient cold. It is attended with sneezing, blocking of the nostrils due to the swollen mucous membrane, watery discharge from the nose, slight elevation of temperature, and later a tendency to subnormal temperature. There is itching of the inner angle of the eye and of the roof of the mouth in the region of the soft palate. The difficulty of nasal breathing, which is usually present, is aggravated when the patient is lying down and is less when the patient is exercising. Unlike an ordinary cold, however, the discharge usually remains thin and watery and becomes thickened only toward the termination of the attack.

There is usually considerable general depression associated with the subnormal temperature and the discomfort in breathing. The mouth and throat become dry because the obstruction of the nose necessitates mouth breathing, thus adding to the discomfort. Many of these cases are complicated with asthma, which increases the suffering of the patient.

Relief is experienced when the supply of pollen from any cause is diminished or when it ceases, as on a sea voyage. A continued rain gives relief; also the absence of wind, or a wind blowing the pollen away from the patient. The symptoms described above and their recurrence at certain periods of the year should simplify the diagnosis.

History.

The development of hay fever about the time of hay harvest led to the belief that this was the cause of the disease. It was not until about 1870 that the relationship of pollen to the disease was established.

The particular pollens causing this disease were for a long time unidentified. As an illustration of this, when a patient developed an attack in the neighborhood of weeds, the conspicuous goldenrod was at once suspected and the ragweed, with its insignificant green flowers, was unobserved. While the pollen of many plants is wind borne, it varies to a marked degree. The pollen of the goldenrod, for instance, is toxic to susceptible persons and will develop a reaction if applied to the nostrils, but it is not abundant, is dislodged with difficulty, and is wind-borne to only a slight degree. In spite therefore of the fact that the goldenrod is treated in most reports and text-books as an important factor in hay fever, it is responsible in only a small percentage of cases.

In order to understand the subject of pollens and the reason for certain varieties being so abundant in the atmosphere, it will be well first to consider the nature of pollen and its relation to flowers in general.

A Perfect Flower.*

A diagram of a perfect flower is shown in figure 1. In order to be perfect a flower must have two sets of organs, first, one or more bodies occupying the center of the flower, called *pistils* and, second, around these a set of bodies, varying in number from one to many, called *stamens*. What is popularly understood as the flower, the bright-colored portion, is really only an accessory which may or may not be present. In the figure shown (Fig. 1) the center of the flower is occupied by one large pistil. The basal portion is the ovary (F), which in this case contains a single seed (S), as yet undeveloped. On the top of the ovary is a short tube, the style (g), while the extreme tip of the style is the stigma (n). The two or three little grains on the top of the stigma (p), shown in the figure, are the pollen grains. Around the pistil are two stamens, each consisting of a stalk or filament, at the end of which is a sack-like body, divided

* "A Perfect Flower," "Pollen," and the botanical descriptions of the hay-fever weeds were prepared by Prof. R. S. Coock, Department of Botany, Tulane University.

into two partitions, the anther (a). In the anther is formed a powdery substance, which is the pollen.

Pollen.

No plant can form a perfect fruit with seeds unless it has been fertilized by pollen. This must first be deposited on the stigma (pollination), and the pollen grain must germinate and grow down the style until it reaches the ovule in order to complete the process of fertilization.

In perfect flowers in which the two kinds of organs are almost touching each other, as is very often the case (Fig. 2), pollination is a very simple matter. But there are many flowers which are not perfect, some containing stamens only (Fig. 3) and others only pistils (Fig. 4). In these cases the pollen may have to travel a considerable distance, even several miles, to reach a pistil. This is the case with the persimmon, willows, the ragweeds, grasses, and many other plants.

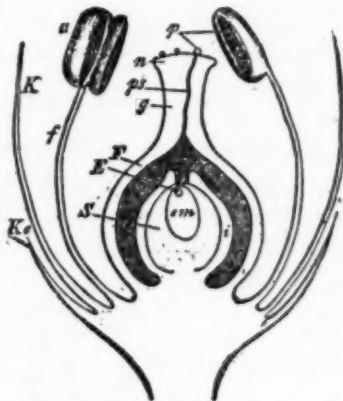


FIG. 1.—A perfect flower. From "Elementary Botany," by George Macloskie.

Conveyance of Pollen.

There are two principal methods by which pollen is carried from one plant to another. One method is by insects, the other by the wind. In the first case the flower is usually bright-colored, or white if it blooms at night, sweet-smelling and with honey glands, and the pollen grains are comparatively few. In the second case the flower is not bright-colored, sweet-smelling, nor honey-secreting, and the pollen is formed in immense quantities and is light and buoyant.



FIG. 2.—Section of a flower (cherry blossom) showing the pistil surrounded by the pollen-bearing stamens. Modified from "How Plants Grow," by Asa Gray.

The only pollens which can cause hay fever are those which are carried by the wind, and are therefore in the air. In warm climates, where weeds of some kind are growing almost continually, there is probably no month in the year in which there is not some pollen in the air. All plants that have very inconspicuous flowers, as is the case with most of our common weeds, which are very numerous and

form pollen in great abundance, are probably wind-pollinated and may be regarded as dangerous from a hay-fever standpoint.

Hay-Fever Weeds.

The characteristics of hay-fever weeds may therefore be summarized as follows: 1. They are wind-pollinated. 2. Very numerous. 3. The flowers are inconspicuous, without bright color or scent, and the pollen is formed in great quantities. These are the characteristics of almost all plants which occur as weeds in empty lots, neglected gardens, sidewalks, and waste land generally.

How Hay-Fever Weeds Are Recognized.

All weeds having the above qualities are suspicious from a hay-fever standpoint. To place them definitely in this class, however, they must stand the biological test. A small amount of the pollen is applied to the nostril of the patient or to the angle of the eye, and if



FIG. 3.—Pollen-bearing staminate flower of moonseed. Modified from "How Plants Grow," by Asa Gray.



FIG. 4.—Pistillate (fertile) flower of moonseed. Modified from "How Plants Grow," by Asa Gray.

this produces a hay-fever reaction it completes the test and the plant is classified with the hay-fever weeds. This reaction to be positive must be produced not only during the hay-fever season, but at any time of the year.

To establish the toxicity of a weed, however, both the botanical and biological tests are required. The botanical test is not sufficient, as many weeds, in spite of being wind-pollinated and numerous and with insignificant flowers, may be harmless because they fail in the biological test.

On the other hand, many plants which pass the biological test do not enter the hay-fever class because they are not numerous or wind-pollinated, and therefore their pollen is not in the atmosphere and can not reach the nostrils of susceptible persons unless by direct contact with the flower. The failure to include this botanical test has resulted in placing many harmless plants, such as the rose and golden rod, in the hay-fever list.

Type of Hay-Fever Weeds.

The plants which form the type of hay-fever-producing weeds are the common ragweed (Fig. 6) and the giant ragweed (Fig. 7). In the former the pollen is not only wind-borne, but is produced in such abundance that a slight blow will dislodge it in clouds, and is so light that the wind will easily carry it to a considerable distance. Under favorable climatic and soil conditions this weed is found in every neglected field, on roadsides, and in vacant city lots. In more moist lands, however, the giant ragweed takes its place and is found in similar profusion. These two varieties of ragweed have been found by the research department of the American Hay-Fever Prevention Association to be responsible for about 85 per cent of all cases of autumnal hay fever in the sections in which these weeds are prevalent. As the large majority of hay-fever cases in the United States are of the autumnal hay-fever form, the importance of a careful study of the most effective means of eradicating these weeds is clearly indicated.

Cause of Reaction.

If a susceptible person is brought within the pollinating radius of hay-fever weeds so that the pollen may reach his nostrils in sufficient quantity he will react, the length of time required for reaction depending on the kind and amount of pollen he has inhaled and his resistance to hay fever. In the cases in which the variety of hay fever is known, as in the ragweed form, the commencement of the attack may be accurately predicted by watching for the appearance of the pollen on the staminate flowers, and the disappearance of the attacks may likewise be foretold.

Proof of Reaction.

For the past eight years we have kept on hand the pollen-containing flowers of hay-fever weeds for testing patients in the diagnosis of hay fever. In susceptible subjects typical reactions can be induced by inhaling the pollen not only during the ordinary hay-fever season, but at any time of the year. The positive relationship of pollen to hay fever is in this way absolutely confirmed.

The relationship of the ragweeds to fall hay fever, in which the development of the disease, its duration, and conclusion correspond with the pollinating period of these weeds, has been clearly established. A more difficult problem, however, is the identification of other plants which are responsible for the remaining forms of hay fever. These, while less frequent than the autumn form, are important, not only because they represent in the aggregate a considerable number, but also because they are frequently of longer duration.

In the following list, the weeds are described not only because they represent the principal causes of hay fever, but also because they characterize the type of hay-fever weeds in general. Their actual number is evidently very large, as any weed with abundant wind-borne pollen and growing in great profusion, probably has its hay-fever victims.

Common Hay-Fever Weeds.

1. *Common ragweed, Roman wormwood—Ambrosia artemisiifolia* (Fig. 6).—This *Ambrosia* or ragweed is called "artemisiifolia" on account of its leaves resembling those of the wormwood (*Artemisia*). It is an annual with leaves much cut and thin, opposite and alternate, as shown in the illustration. The leaves are variable, however, those on the flowering branches sometimes being undivided. It has spikes of green flowers (staminate) at the end of the branches. The pistillate or fertile flowers are at the intersection of the branches with the stalks. It is found along roadsides and in dry situations, especially in fields where a crop of wheat, rye, or oats has been harvested in early summer and afterward neglected. It grows from 1 to 5 feet in height and blooms from August to October or later. It is a native of America and is found in dry soil from Nova Scotia to Florida and west to British Columbia and Mexico. It is comparatively rare and local west of Kansas, and is then replaced by *Ambrosia psilostachya*, *Franeria acanthicarpa* and *Iva axillaris*, all of which also have abundant wind-borne pollen.

2. *Giant ragweed—Ambrosia trifida* (Fig. 7).—A tall, unsightly weed, also called "horse-weed," 6 to 15 feet high, with a rough, hairy stem. The lower leaves deeply three-parted, with separate margins. Some of the upper leaves undivided, oval or ovate in shape. The flowers are in panicle racemes, the upper flowers staminate, the lower pistillate. It is common in moist soil from Quebec to Florida, and west to Nebraska, Colorado, and New Mexico. In the moist land near the Gulf Coast it forms about 90 per cent of all the ragweeds, while in the drier section of the country the reverse is the case.

3. *Western ragweed—Ambrosia psilostachya* (Fig. 8).—A perennial weed, 2 to 6 feet high, growing from running root stocks, thicker and stouter than the common ragweed, covered with loose shaggy white hairs; leaves thick, much divided, the lobes of the leaves lanceolate and acute; the staminate heads on short pedicels; the fruit solitary in the axils below. This is the common form in the prairie country of Louisiana and in the West generally it replaces the common ragweed.

4. *False wormwood—Bastard feverfew—Parthenium hysterophorus* (Fig. 9).—Two to three feet high, with small white flowers, resembling tiny cauliflowers. It is almost always in bloom and may therefore cause hay fever at any season of the year. It is very common along the streets and sidewalks, and in vacant city lots. Leaves much divided, hairy, closely resembling the leaves of the common ragweed, from which it can easily be distinguished by the small white flowers. Florida and Alabama to Texas. January to December.

5. *Marsh elder—Iva ciliata* (Fig. 10).—An annual 3 to 6 feet high, with a rough, hairy stem, and small nodding greenish-white heads of flowers, each subtended by a leafy bract. Leaves ovate, pointed, coarsely toothed, downy beneath, on slender ciliate petioles, bracts of the involucre and fertile flowers, three to five. Moist ground and waste places generally. Nebraska to Louisiana, Texas, and New Mexico. August to November.

6. *Western elder—Iva axillaris*.—A herbaceous western plant growing from woody creeping root stocks; the stems or branches nearly simple, a foot or two high; leaves variable in shape, from obovate to linear, obtuse mostly entire, sessile, rarely over

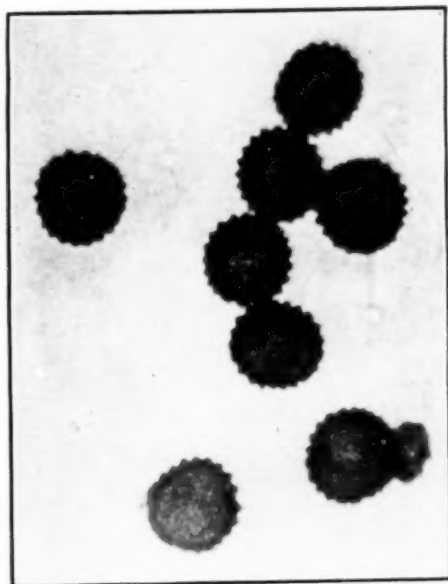


FIG. 5.—POLLEN OF GIANT RAGWEED, MAGNIFIED 750 DIAMETERS.



FIG. 6.—COMMON RAGWEED (*AMBROSIA ARTEMISIAEFOLIA*).



FIG. 7.—GIANT RAGWEED (AMBROSIA TRIFIDA).

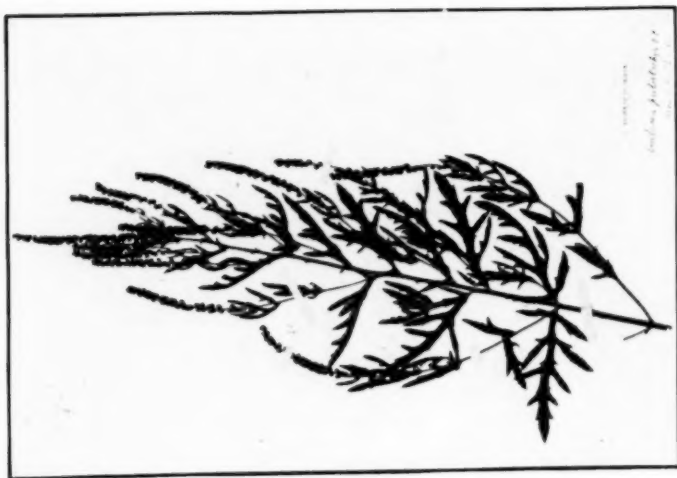


FIG. 8.—WESTERN RAGWEED (AMBROSIA
PSILOSTACHYA).

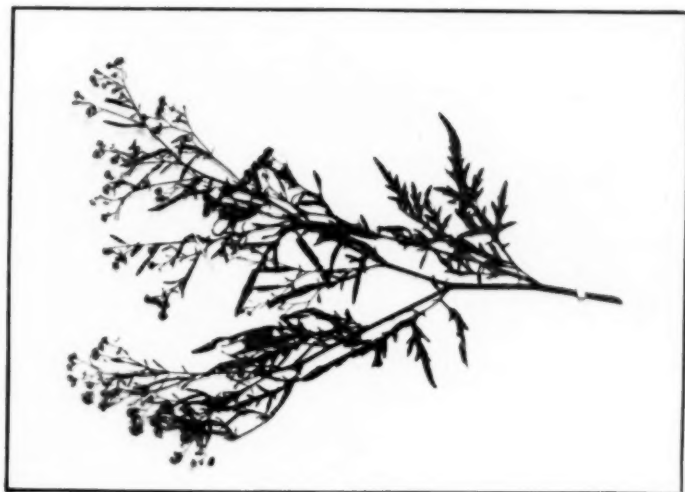


FIG. 9.—FALSE WORMWOOD, BASTARD FEVERFEW
(*PARTHENIUM HYSTEROPHORUS*).



FIG. 10.—MARSH ELDER (*IVA CILIATA*).



FIG. 11.—HAY-FEVER WEEDS (GIANT RAGWEED) ON SUBURBAN ROADSIDE.



FIG. 12.—HAY-FEVER WEEDS (GIANT RAGWEED AND MARSH ELDER) ON CITY LOT AND SIDEWALK.

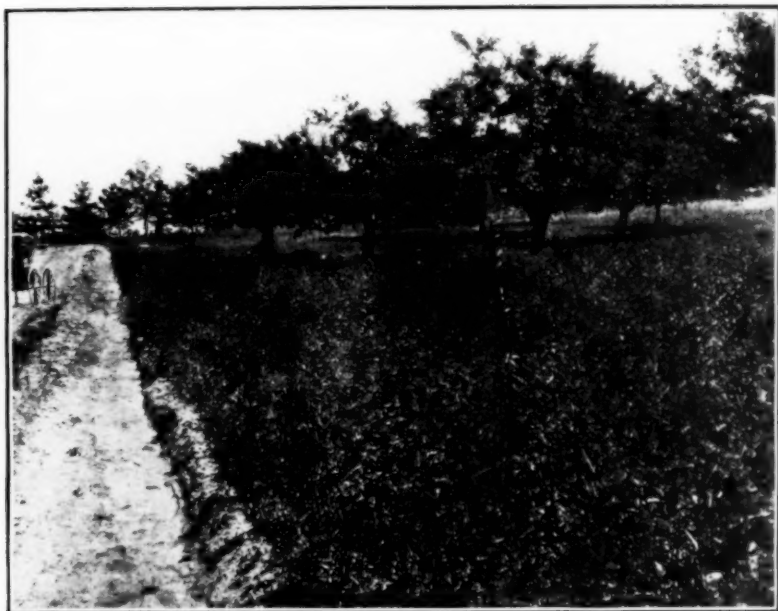


FIG. 13.—HAY-FEVER WEEDS (COMMON RAGWEED) IN NEGLECTED ORCHARD ADJOINING PUBLIC ROAD.



FIG. 14.—HAY-FEVER WEEDS (COMMON RAGWEED) IN NEGLECTED OAT FIELD.



FIG. 15.—HAY-FEVER WEEDS (COMMON AND GIANT RAGWEED) ON COUNTRY ROADSIDE.



FIG. 16.—HAY-FEVER WEEDS (GIANT RAGWEED AND MARSH ELDER) ADJOINING A PUBLIC PARK.

an inch long, the uppermost usually much surpassing the mostly solitary heads in their axils. Growing usually in sandy saline soil.

7. *Careless weed, thorny amaranth*—*Amaranthus spinosus*.—A smooth, bushy branched annual naturalized from Tropical America. Stem reddish; leaves ovate to ovate-lanceolate, dull green; a pair of spines in their axils. Flowers small, greenish-yellow, crowded in close and small axillary clusters; staminate and pistillate flowers separate, three stamens to a flower. Three to six feet high, widely spreading. Waste ground generally, common on empty ground that has been cultivated. April to December.

8. *Cockle bur*—*Xanthium canadense*.—A coarse annual, with branching stems and alternate petioled leaves. Leaves broadly ovate, cordate, usually three-lobed and simply or doubly dentate. Sterile and fertile flowers in different heads, the latter clustered below, the former in short spikes. The fruit, a rough burr, with usually two curved beaks and covered with prickles straight-tipped or hooked, 2 to 6 feet high. Rich soil, especially moist places. June to December.

9. *False ragweed*—*Franseria acanthicarpa*.—A herbaceous plant, diffusely spreading from an annual or perennial root; rough and often covered with grayish hairs; leaves much divided, closely resembling Ambrosia; sterile and fertile heads, sometimes separate, sometimes mixed; the fertile involucre with a single pistil in each cell, armed with spines in more than one series; spines 45 mm. long, flattened, the tip usually straight, the whole head resembling a burr. A western plant, Minnesota, Saskatchewan, Canada, and southwest.

10. *Yellow dock*—*Rumex crispus*.—Coarse herbs, with small unsightly greenish-brown flowers, which are crowded and commonly whorled in panicle racemes; the petioles of the leaves sheathing at the base. Two to three feet high. Leaves with strongly wavy, curled margins, lanceolate, acute.

The Grasses a Cause of Hay Fever.

It should also be remembered that the grasses are on the hay-fever list. They answer the botanical requirements of being abundant, wind-pollinated, with insignificant flowers and abundance of pollen. They also pass the biological test by being noxious to a large class of hay-fever sufferers—in fact, in England and Europe generally, where the ragweed and other weeds of this class are not found, they are the most common cause. They begin to pollinate in May and are one of the most common causes of hay fever commencing at that season.

The grass family (Gramineæ) is very extensive and includes many of the cultivated forms. Some of the common varieties are Johnson (*Sorghum halapense*), Canary (*Phalaris canariensis*), and Smut grass (*Sporobolus indicus*).

Total Number of Hay-Fever Weeds.

The above list has been prepared to show the most common hay-fever weeds. These, however, form only a small proportion of the total varieties, and it is probable that the majority of weeds, which are found in great profusion and the pollen of which is abundant and wind-borne, are the cause of hay fever to some persons.

Prevalence.

It has been found that in most parts of the United States from 1 to 2 per cent of the population suffer from hay fever at some portion of the year, indicating that its victims may be counted by the hundred thousands.

Susceptibility.

The question of susceptibility is a complicated subject, but in this respect does not differ materially from susceptibility in other diseases. It is well known, for instance, that while many persons are extremely sensitive to poison ivy, others can handle it with impunity. In diphtheria, also, we find that some persons, known as "carriers," actually have these germs in their throats without being infected with this disease.

Cause of Reaction.

The reaction of hay fever is a complex process. The primary irritation may take place immediately or may be deferred for several minutes. This is influenced by the physical formation of the pollen. In plants in which the pollen is covered with spiculæ (Fig. 5), such as the *Ambrosia artemisiæfolia* and *trifida*, *Parthenium hysterophorus*, *Dracopis amplexicaulis*, etc., the primary reaction is almost immediate; while with smooth pollen, such as the *Amaranthus spinosus*, *Rumex crispus*, *Chenopodium anthelminicum*, and the Gramineæ, it is deferred and mild. The persistency with which the mechanical irritation of the pollen is maintained and its influence on the secondary reaction is still under investigation.

The secondary reaction of hay fever is partly due to the continued mechanical irritation of the inhaled pollens and partly to the absorption of the pollen protein through the mucous membrane of the nostrils. The degree to which the patient can resist the primary irritation of the pollen and the extent to which the absorbed pollens are neutralized establish the degree of susceptibility or the immunity of the patient.

Immunity.

Immunity in hay fever is frequently only apparent, the freedom from attack being due to insufficient exposure. This explains the case of persons who have reached the age of 30 or more without being affected, who suddenly develop an attack when they visit a place in which hay-fever pollen is in the atmosphere, or when, as frequently happens, they move their residence to such a locality.

One attack increases the susceptibility, and for this reason is usually followed by other attacks. The investigations of the Research Department of the American Hay-Fever-Prevention Association also indicate that many persons, apparently free of hay fever, react to hay-fever pollen if the quantity is, for any reason, greatly increased.

Hay Fever in Children.

Hay fever is common in children, but the reason that this is not more generally known is that these attacks are usually mistaken for "colds." In view of this, parents should be warned, when the symptoms suggest hay fever, that the child should not be exposed to infection from hay fever weeds.

Among the weeds which are likely to infect children is the daisy fleabane (*Erigeron strigosus*). While it is not strictly a hay-fever weed, as it is also fertilized by insects, it produces an abundance of noxious pollen, which will develop hay fever if applied directly to the nostrils. It somewhat resembles the common daisy and is therefore frequently collected by children.

The daisy fleabane is a singularly common weed which grows from 1 to 2 feet in height. The light green leaves are linear and toothless or nearly so, the lower one being broad at the tip. The little daisy-like flowers are one-half inch in width, and with a large green yellow disk; occasionally the white rays are lilac-tinged and sometimes they are extremely short or altogether absent. They are common in neglected fields and on roadsides.

The pollen of the fleabane is so noxious that one application of the flower to the nostril may produce an attack of hay fever lasting three or four days. In one case, in which this was inhaled in order to test the reaction, severe symptoms of hay fever developed in a few minutes, and the constitutional symptoms in an hour. The effects lasted four days, the local effect being limited to the left nostril, to which the pollen was applied. This case resembled a "cold" so perfectly that, had the origin not been known, it would undoubtedly have been so considered.

Care should therefore be exercised in allowing children to inhale flowers of suspicious weeds, not only on account of the danger of producing an acute attack of hay fever but also because such an attack increases the child's susceptibility to hay-fever pollens.

Treatment.

In regard to treatment, it must be admitted that thus far no method has given very satisfactory results. Immunizing injections of pollen extracts and of vaccines have been tried, but have thus far not passed the experimental stage. It is hoped that further investigations along these lines will eventually give sufficient data to decide the reliability of these methods.

Prevention.

When we realize the great number of persons affected with hay fever and the great suffering which it entails, we can appreciate the importance of concerted efforts to prevent this disease. The first

important step in the work of prevention is the education of the public in the responsibility of pollens of weeds in causing hay fever. When the public realizes that the common weeds are the cause of suffering to many persons who may be living at a considerable distance, it will view these weeds from a new angle and will make use of one of the many ways of destroying them, or at least preventing them from reaching the stage of pollination.

Eradication.

The method of eradicating the hay-fever weeds is naturally a question of convenience and economy. The most effective is careful cultivation. Where this is not practicable, these weeds may be kept down by grazing cattle, and especially by sheep. When neither of these methods is available, the weeds should be destroyed or cut before they reach the flowering stage, as this will prevent both the pollinating and the formation of the seeds. On the roadside, which is a favorite site for hay-fever weeds, it is sometimes found to be more economical to use some form of chemical weed killer. When these methods are persistently carried out for a few years, the results will justify the cost and the energy expended.

An important item in the eradication of hay-fever weeds is the distance at which pollen may produce an attack of hay fever. It has been shown by means of glass slides exposed to the wind that some pollen may travel a great distance—even several miles. We have found, however, that pollen scatters rapidly as it is carried by the wind from the parent weed, the decrease being estimated to be inversely as the square of the distance. On this account pollen is not often a source of hay fever at a distance of over a half mile, and even a much shorter distance is often sufficient to give relief. According to the above rule, a patient at 1,000 feet, or about three ordinary city blocks, would inhale only one one-hundredth part of the pollen to which he would be exposed at 100 feet.

Special Legislation.

The warfare against weeds, even from an agricultural standpoint, has been considered of so much importance that many States have enacted laws to control them. So difficult was the task of fighting these weeds individually, and so onerous from the standpoint of labor and expense, that the legislative power of the State was invoked to assist in their eradication.

In many cases this has been entirely successful, as the weeds against which this special legislation was directed have practically been eradicated.

The most important hay-fever weeds, however, such as the rag-weeds, have not been specified in most of these laws, as their noxious character from a health standpoint has only recently been recognized; but many of the less active hay-fever weeds are mentioned, such as the yellow dock, cocklebur, etc. In New York an antiweed bill has recently been introduced in the State legislature, which specifically mentions the ragweeds and other hay-fever weeds.

The following is a list of the States having antiweed laws and the weeds which form the object of this legislation:

Laws of the various States for the destruction of weeds.

Connecticut.—Statutes providing for the destruction of Canada thistle, burdock, white or oxeye daisy, snapdragon or toadflax, sow thistle, yellow dock, mustard, wild parsnip, and quack grass.

Idaho.—Act enabling 25 per cent of resident freeholders of any road district to petition board of county commissioners for the destruction of any noxious weeds.

Illinois.—Destruction of cocklebur, Canada thistle, Russian thistle, and all other kinds of thistle.

Michigan.—Destruction of Canada thistles, milkweed, wild carrots, oxeye daisy, or other noxious weeds.

Missouri.—Destruction of Canada or Scotch thistles.

North Dakota.—Destruction of noxious weeds.

South Dakota.—Destruction of wild sunflower, Canada thistle, cocklebur, burdock, and quack grass.

Oregon.—Destruction of Russian thistle, Canada thistle, Chinese thistle, cocklebur, *Atriplex argentea* (called silver salt bush).

Ohio.—Destruction of all brush, briars, burrs, vines, Russian or Canadian or common highway thistles growing along the public roads.

Pennsylvania.—Destruction of Canadian weeds or thistles.

The above data were obtained by an inquiry addressed to the attorney general of each State by Prof. W. J. Waguespack,¹ who reports that the following-named States also have antiweed laws: Alabama, Arizona, California, Kentucky, South Carolina, and Washington. The lists of the weeds to be controlled by these States have not been obtained.

In New Orleans an effective ordinance for the control of hay-fever weeds was introduced by the American Hay-Fever-Prevention Association and enacted by the city council January 25, 1916, and is now being actively enforced. It has already resulted in a marked reduction of the number of hay-fever cases.

While such laws, properly enforced within corporate limits, will be of valuable assistance, permanent relief will require uniform legislation by the various States. In the States in which weed laws already exist, as in Connecticut, Idaho, Illinois, Michigan, Missouri, North and South Dakota, Oregon, Ohio, Pennsylvania, etc., the amendment of these statutes to include the ragweeds and other hay-

¹ Department of Law, Loyola University, New Orleans.

fever weeds should present no great difficulty. In the remaining States the introduction of suitable legislation will be facilitated by the education of the public in the need of such laws not only from an agricultural but also from a sanitary and economic standpoint.

Health is one of man's most valuable assets, and every person has a right to demand that his health shall not suffer on account of neglect on the part of his neighbor. If hay-fever weeds are allowed to grow on neglected premises, vacant lots, and uncultivated fields and to infect the air with noxious pollen, the sufferers are evidently entitled to relief. There will always be persons who respect their neighbors' rights in health as well as in other matters only when compelled by the majesty of the law. A thorough education of the public regarding the noxiousness of hay-fever weeds, reinforced by adequate legislation, should soon result in removing hay fever from among the list of common diseases.

HEALTH INSURANCE RECEIVING ATTENTION.

At the last meeting of the American Medical Association the house of delegates recommended that every constituent State association be requested to establish a committee on social insurance to work in conjunction with the committee on social insurance of the American Medical Association.

The American Academy of Medicine adopted a resolution authorizing the appointment of a committee to be known as the "social insurance committee," whose duty would be to make careful study of the problem of social insurance, especially those phases known as health insurance, industrial insurance, accident insurance, mothers' insurance, and insurance against nonemployment, and that this committee be requested to submit a preliminary report dealing with health insurance and its relation to physicians to the executive committee before December 1, 1916.

The American Association of Industrial Physicians and Surgeons, organized in Detroit June 12, 1916, created a committee to study health insurance in its relation to the industrial physicians.

The conference of State and Territorial health authorities with the United States Public Health Service has a standing committee on health insurance. The report of this committee, which was made in May, 1916, appears on page 1919. The committee is still at work on this subject.

HEALTH INSURANCE.

REPORT OF STANDING COMMITTEE ADOPTED BY THE CONFERENCE OF STATE AND TERRITORIAL HEALTH AUTHORITIES WITH THE UNITED STATES PUBLIC HEALTH SERVICE, WASHINGTON, D. C., MAY 13, 1916.

Health insurance, as usually operated under governmental systems, provides that all employed persons in certain occupations, and all persons in other occupations earning less than a specified annual income, be entitled in case of illness to certain benefits.

Benefits.—The benefits ordinarily provided are:

(a) Cash payment for a limited period (usually 26 weeks in any 12 months) of a proportion of the wage, or of a fixed sum, to employees, when disabled by sickness or nonindustrial accident. (Industrial accidents are provided for under workmen's compensation laws.)

(b) Medical benefits, which include adequate medical and surgical care, medicines, and appliances in home, hospital, sanatorium, or physician's office, to employees disabled on account of sickness or nonindustrial accident during a limited period (26 weeks in any 12 months).

(c) Maternity benefits, which include cash payment of a small sum in case of confinements of employees or wives of employees.

(d) Cash payment for deaths of insured persons due to sickness or nonindustrial accidents of an amount calculated to cover funeral expenses.

Funds.—The funds are usually provided by payments from employees, employers, and Government appropriations. In Germany the employee pays two-thirds, employer one-third, and the Government pays for certain expenses of supervision. Under the English national insurance act the employee pays four-ninths, the employer three-ninths, and Parliament appropriates two-ninths. In the case of women and persons employed at certain low levels of wages the payment of employer and Parliament are increased and the proportion paid by employee is decreased.

Administration.—The administration both central and local is usually according to some form of representative government. In the local government, in addition to governmental bodies created for the purpose, unions, industrial establishments, and certain societies are utilized for purposes of the local administration of the funds.

Extent of health insurance.—In foreign countries voluntary health insurance systems have been subsidized by the Governments of France, Belgium, Denmark, Sweden, and Switzerland. But more significant as an evidence of the recognition of the efficacy of health insurance is the fact that compulsory systems have been established in Germany, Austria-Hungary, Norway, Great Britain, Serbia, Russia, Luxemburg, Roumania, France (for miners, seamen, and railway employees), and Italy (for railway employees).

In this country we are in the first stage in health insurance. No State, municipal, or other government in any way provides for or aids health insurance. There are, however, large numbers of private systems such as mutual benefit associations and other societies which provide for health insurance; in addition to these there are various employers' benefit associations, trade-union benefits, and commercial insurance with health insurance policies.

Bills providing for the establishment of governmental health-insurance systems have been introduced in the Legislatures of Massachusetts, New York, and New Jersey. In California a State commission has been created for the study of social insurance.

Occupational disease insurance.—In several States occupational diseases have been included in the workmen's compensation acts and the constitutionality of these laws has been upheld by the State supreme courts. This shows a tendency on the part of lawmakers to apply insurance methods in provisions for sickness. Few diseases, however, are altogether due to the hazard of the occupation; in fact, at times the occupational hazard may be greatly aggravated by other conditions which cause impaired resistance in the worker. Thus the responsibility for many of the so-called "occupational" diseases is divided and the classing of them with industrial accidents is not only often impracticable but tends to load on the employer a responsibility which is not altogether his.

The need for health insurance.—The economic cost to every community and to the Nation of preventable diseases and deaths is greatly increased by the unusual prevalence of these diseases and deaths among the unskilled and low-paid industrial workers. All available statistics, both in the United States and in foreign countries, indicate that among those of a low economic status the morbidity and mortality rates are higher than in the rest of the population.

The result of an investigation made for the Federal Commission on Industrial Relations afforded the estimate that each of the 30,000,000 workers in this country loses on the average about nine days each year on account of sickness. Placing the loss in wages at \$2 a day and the cost of medical attention at \$1 a day, the total loss to the wage earner of the Nation would approximate three-quarters of a billion dollars annually. To this should be added the economic loss resulting from invalidity and death, and the loss to industry on account of decreased efficiency due to partial disability. To this should also be added the tremendous sums that are being spent by States, communities, municipalities, and volunteer organizations for the support of charities, free clinics, hospitals, and the like. When all expenditures are taken into consideration, the estimate of \$750,000,000 seems an insignificant sum, indeed.

These cold calculations of cost, however, neither depict real conditions nor represent the real attitude of the American public toward such a situation. The generous response of the American public to the necessities of sufferers in the European war is striking evidence of the willingness of the public to deal promptly and efficiently with a situation when once its significance is understood. It needs only to be brought insistently to public attention that in this country the annual loss of death and lives among our industrial workers is not far behind that caused by the greatest war in history. To inform the public of such a situation is clearly within the province of the State health agencies.

Economic factors increase health hazard.—It is not necessary to inform health officials of the character and extent of the conditions which have caused such a situation, but it is doubtful if the underlying economic factors have been adequately analyzed, especially from the standpoint of responsibility for disease-causing conditions. Without going into detailed statements, it may be said that among the more important of these economic factors are occupational hazards, irregularity of employment, unhealthful conditions of living, the employment of women in industry under modern conditions of work, particularly of married women, and the economic disadvantage at which a considerable proportion of wageworkers and their families are placed as the result of low wages and insufficient annual income. A number of recent investigations have shown that these factors are important underlying causes of disease. Any adequate remedial program must fix the responsibility for these conditions in order to arrive at a proper basis for efficient measures.

Responsibility for conditions causing disease.—In a general way it may be said that there are three groups which are responsible for conditions that affect the health of the wage earner—employers, employees, and the community. The employer's responsibility is largely limited to places of employment and conditions of work. The public's responsibility is limited in great measure to community conditions or conditions common to all groups of citizens. To the individual wage earner is largely left the responsibility for the healthfulness of the conditions under which he and his family live, but it should not be overlooked that under present conditions he is often handicapped by the effects of his occupation and of unhealthful community environment. This is a responsibility which a considerable proportion of wage earners are financially unable to meet.

These considerations—the presence of economic factors and the financial inability of so many wage earners to maintain a healthful standard of living—clearly indicate the necessity for a health program which will coordinate the efforts of all responsible groups and of the

numerous health agencies at present working too independently in their respective fields.

Advantages of health insurance.—The experience of foreign countries and a study of the situation in this country have shown that such a coordination of effort may be possible in a governmental system of health insurance if properly adapted to National or State governments. By providing for the insurance of all workers, adequate relief will be afforded to even the lowest paid worker.

The joint contribution of all employers, employees, and the community to the support of a health insurance fund will give to each group a financial incentive to lessen the cost by the prevention of disease, since a definite money valuation would be fixed upon each day of sickness.

By providing medical service, with a continuance of a substantial portion of his income during sickness, the wage earner's family would not be rendered destitute when he stopped work on account of sickness and he himself could receive prompt treatment and not be compelled to continue at work until his health was seriously impaired.

Maternity benefits are calculated to conserve the health of the mothers and lower the infant mortality rate.

The joint provision and control of the fund by employers, employees, and the community will prevent any taint of charity or paternalism, afford a basis on which capital and labor can work together for a common end, and stimulate a spirit of cooperation in the movement for improving the welfare of the wageworking population in every industrial community. Just as the workmen's compensation laws have brought about the nation-wide "safety-first" campaign, so may we expect from the enactment of health insurance laws a movement for better health that will be intelligent as well as popular.

Relation to Medical Profession and Health Agencies.

As stated above, the local administration of health insurance funds is usually left to local boards created for this purpose, or to trade-unions, industrial establishments, or societies which have been approved by the central governing board or commission. The German act has left the administration of the medical benefits to these local bodies, and this has resulted at times in restricting the insured persons' choice of physicians to a limited number of contract doctors employed by these local agencies and thus caused so much friction as to result in a "doctors' strike." The English act, in the effort to remedy this defect, permitted free choice of physicians registered on the panels of the funds but did not place proper restrictions upon the signing of certificates admitting insured persons to benefits. The result was that the physicians were entirely too complaisant in signing certificates and the funds were subjected to improper drain.

In the bill for health insurance that has been introduced in the several State legislatures the German plan has been followed, the matter of providing medical benefits has been left in the hands of the local bodies, and no provision has been made for correlating the system with existing health agencies. These are serious objections, since without such provisions a health insurance law will have little value as a preventive measure, although it may meet with the approval of those who advocate it as a relief measure.

There must be a close connection of the administration of any health insurance system with the health agencies of the country and with the medical profession. It is believed that this can be done in three ways: (1) By providing efficient staffs of medical officers in the Federal and State health departments to carry into effect the regulations issued by the central governing boards or commissions; (2) by providing a fair and sufficient incentive for the active cooperation of the medical profession; and (3) by providing for a close cooperation of the health insurance system with State, municipal, and local health departments and boards.

Corps of full-time medical officers.—In view of the experience in both Europe and America, it would seem best to place the administration of the medical benefits directly under governmental agencies and to insert a provision that no cash benefits be paid, except on the certificate of medical officers of the national and State health departments acting as medical referees under the regulations of the central governing board or commission. Such medical officers should be selected according to civil-service methods. Since these officers are the representatives of the health departments in the funds, their selection and appointment should also be based upon their knowledge of preventive as well as of clinical medicine. After a probationary period of service satisfactory to the health administration, they should be given permanent appointments, subject to removal only for inefficiency or immoral conduct. One of their duties should be to examine each disabled beneficiary and keep themselves informed as to the progress of his recovery. It is needless to say that the referees should not be permitted to engage in private practice.

Free choice of registered physicians.—With such a check on the payment of cash benefits, the medical and surgical treatment provided for beneficiaries could safely be left to the physician of the patient's choice, and payment made on a capitation basis regardless of whether the patient was sick or well, after the manner of the English national insurance act. This method of selection and payment of physicians for the medical and surgical relief would offer every incentive to them to keep their patients well and to endeavor to please by rendering their most efficient service.

Hospital and dispensary treatment.—In addition, free choice should be allowed to those who prefer institutional treatment by a selected staff, when available; and to this end the local and federated governing bodies might even provide dispensary and hospital units, each such unit to include a staff of physicians, surgeons, oculists, dentists, and other specialists, and a staff of visiting and bedside nurses.

Health insurance a measure for prevention of disease.—The greatest value of such a system of administration of the medical benefits would be in the organized corps of medical officers and of attending physicians registered on the panel and in the opportunity it would offer for preventing disease among the insured persons and their families. It would be through the corps of full-time medical officers of the health department acting as referees, that the health insurance system would be linked up with other health agencies. It is not necessary to relate here the advantages which would arise from the visits of such specially trained men into the homes of all sick persons. Nor is it necessary to tell how these officers acting as health officers could further lower the sick rate. The objection could not be raised that such a corps would be too expensive. It would not require more than one such medical officer to every 4,000 insured persons and at that rate they could more than save their salaries by relieving insurance funds from paying unjust claims. Furthermore, while an estimate can not be made of the amount to be saved by their efforts in the way of lowering the sick rate, it is safe to say that it would amount to many times more than the sum of their salaries.

Health officials should realize now, the necessity for correlating the administration of the medical benefits of any proposed health insurance system with existing health agencies. If health departments are at present inefficient, they should be strengthened and made adequate to meet all demands.

To enact a health insurance law simply as a relief measure without adequate preventive features would be a serious mistake, but with a comprehensive plan for disease prevention there is every reason to believe that it would prove to be a measure of extraordinary value in improving the health and efficiency of the wage-earning population.

Recommendations.

The following fundamental provisions should be embodied in any health-insurance measure proposed for National or State governments:

1. *Insured persons.*—Every person engaged in a gainful occupation and earning less than a specified annual income, say \$1,000, should be entitled to the benefits provided under the law. Every

person earning more than the specified annual income should be allowed to qualify for the same benefits or greater benefits according to annual income.

2. *Funds*.—To be provided jointly by contributions from employees and employers; the Government to appropriate for the expenses of supervision and administration.

3. *Benefits*.—The following benefits should be provided:

(a) *Cash benefits*.—Weekly cash payments in case of disability due to sickness, nonindustrial accident, or to child-bearing by the beneficiary, for a period not to exceed 26 weeks in any one 12-month period.

(b) *Death benefits*.—Cash payment (for funeral expenses) to legal heirs for death due to sickness or nonindustrial accident.

(c) *Medical benefits*.—To include adequate medical and surgical care, medicines and appliances in home, hospital, sanatorium, dispensary, or physician's office, beginning with the first day of disability, whether due to sickness, nonindustrial accident, or to child-bearing by the beneficiary or the wife of the beneficiary, and limited to a period of 26 weeks in one 12-month period.

4. *Administration*.—All matters of promulgation of rules and regulations and appeals should be vested in a National or State commission created for this purpose. All matters of local administration should be vested in local boards of directors, federated according to districts, subject to supervision by the central authorities, and rules and regulations promulgated by the commission.

The commission and all local and federated boards should be composed of persons representing the contributors to the funds. The number representing employees and employers should be in the same ratio as their respective contributions.

Provision should be made for free choice of any physician registered on the local panel, and provision might be made also for adequate institutional care for those who prefer this method of medical benefits.

A corps of full-time medical officers should be provided within the National or State health service to have supervision of all hospital and dispensary relief; to examine all insured persons claiming to be disabled, and issue certificates in accordance with the regulations promulgated by the commission; to advise the administrative authorities and all contributors to the funds as to the best measures for the relief and prevention of sickness; to advise with the physicians attending sick members as to measures which will shorten the periods of disability; and to perform such other duties as may be fixed by regulations.

PLAGUE-PREVENTION WORK.

CALIFORNIA.

The following report of plague-prevention work in California for the week ended June 24, 1916, was received from Senior Surg. Pierce, of the United States Public Health Service, in charge of the work:

SAN FRANCISCO, CAL.

RAT PROOFING.

New buildings:	
Inspections of work under construction..	223
Basements concreted (square feet).....	81,225 49
Floors concreted (square feet)....	193,605 33
Yards, passageways, etc. (square feet).....	13,302 53
Total area of concrete laid (square feet).....	288,132
Class A, B, and C (fire-proof) buildings:	
Inspections made.....	149
Roof and basement ventilators, etc., screened.....	753
Wire screening used (square feet)	3,640
Openings around pipes, et., closed with cement	1,630
Sidewalk lens lights replaced.....	1,500
Old buildings:	
Inspections made.....	377
Wooden floors removed.....	45
Yards and passageways, planking removed.....	23
New foundation walls installed (cubic feet).....	5,795
Concrete floors installed (square feet).....	22,368 27
Basements concreted (square feet).....	32,845 35
Yards and passageways, etc., concreted (square feet).....	19,886 77
Total area concrete laid (square feet).....	75,099
Floors rat proofed with wire cloth (square feet).....	1,788 3
Buildings razed.....	23
New garbage cans stamped approved...	200
Nuisances abated.....	438

OPERATIONS ON THE WATER FRONT.

Vessels inspected for rat guards.....	22
Reinspections made on vessels.....	20
New rat guards procured.....	30
Defective rat guards repaired.....	5
Rats trapped on wharves and water front..	37
Rats trapped on vessels.....	60
Traps set on wharves and water front.....	134
Traps set on vessels.....	235
Vessels trapped on.....	20
Poisons placed on water front.....	3,600
Poisons placed within Panama-Pacific International Exposition grounds.....	36,000
Bait used on water front and vessels—bacon (pounds).....	6
Bread used in poisoning water front (loaves).....	9
Poison used on water front (pounds).....	3

SAN FRANCISCO—Continued.

RATS COLLECTED AND EXAMINED FOR PLAGUE.

City.	Col- lected.	Exam- ined.	Infected.
San Francisco.....	110	101	(1)
Oakland.....	8	8	(1)
Total.....	118	109	(1)

¹ None.

RATS IDENTIFIED.

Mus norvegicus.....	19
Mus rattus.....	45
Mus alexandrinus.....	46
Mus musculus.....	None.

SQUIRRELS COLLECTED AND EXAMINED.

County.	Col- lected.	Exam- ined.	Infected.
Alameda.....	926	926	(1)
Contra Costa.....	773	773	
San Benito.....	827	827	
San Joaquin.....	200	200	(1)
Stanislaus.....	257	257	(1)
Santa Clara.....	337	337	(1)
San Luis Obispo.....	456	456	(1)
San Mateo.....	270	270	(1)
Santa Cruz.....	255	255	(1)
Merced.....	177	177	(1)
Modoc.....	103	103	(1)
Lassen.....	25	25	(1)
Sonoma.....	49	49	(1)
Mendocino.....	26	26	(1)
Total.....	4,681	4,681	4

None.

OTHER ANIMALS COLLECTED AND EXAMINED.

Rabbits.....	10
Found infected.....	None.

RANCHES INSPECTED AND HUNTED OVER.

Alameda County.....	68
Contra Costa County.....	35
San Benito County.....	31
San Joaquin County.....	44
Stanislaus County.....	26
Santa Clara County.....	40
San Luis Obispo County.....	12
San Mateo County.....	14
Santa Cruz County.....	26
Merced County.....	2
Modoc County.....	27
Lassen County.....	10
Sonoma County.....	2
Mendocino County.....	4

PLAGUE-INFECTED SQUIRRELS.

Contra Costa County:

Shot June 15, 1916. J. M. Kofford ranch, 4½ miles south of Antioch, sec. 2, T. 1 N., R. 1 E.....	1
Shot June 16, 1916. Peoples Water Co. property, Sather, lessee, Sobrante Grant 8 miles southeast of San Pablo.....	2

PLAGUE-INFECTED SQUIRRELS—Continued.

San Benito County:

Shot June 15, 1916. D. D. Sindell ranch, sec. 16, T. 14 S., R. 7 E., 4 miles east of Paicines.....	1
--	---

RECORD OF PLAGUE INFECTION.

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number ro- dents found in- fected since May, 1907.
Cities:				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	(1)	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	(1)	126 rats.
Berkeley.....	Aug. 28, 1907	(1)	(1)	None.
Los Angeles.....	Aug. 11, 1908	(1)	Aug. 21, 1908	1 squirrel.
Counties:				
Alameda (exclusive of Oakland and Berkeley).....	Sept. 24, 1909	Oct. 17, 1909	June 7, 1913	291 squirrels, 1 wood rat.
Contra Costa.....	July 13, 1915	(1)	June 16, 1916	1,621 squirrels.
Fresno.....	(1)	(1)	Oct. 27, 1911	1 squirrel.
Merced.....	(1)	(1)	May 12, 1916	7 squirrels.
Monterey.....	(1)	(1)	May 27, 1916	38 squirrels.
San Benito.....	June 4, 1913	(1)	June 15, 1916	65 squirrels.
San Joaquin.....	Sept. 18, 1911	(1)	Aug. 26, 1911	18 squirrels.
Santa Clara.....	Aug. 31, 1919	(1)	May 30, 1916	31 squirrels.
San Luis Obispo.....	(1)	(1)	Jan. 29, 1910	1 squirrel.
Santa Cruz.....	(1)	(1)	May 30, 1916	5 squirrels.
Stanislaus.....	(1)	(1)	June 2, 1911	18 squirrels.

¹ None.

The work is being carried on in the following-named counties: Alameda, Contra Costa, San Francisco, Stanislaus, San Benito, Monterey, Merced, Santa Clara, San Mateo, Santa Cruz, San Luis Obispo, San Joaquin, Sonoma, Mendocino, Lassen, and Modoc.

LOUISIANA—NEW ORLEANS—PLAGUE ERADICATION.

The following report of plague-eradication work at New Orleans for the week ended July 1, 1916,¹ was received from Passed Asst. Surg. Simpson, of the United States Public Health Service, in charge of the work:

OUTGOING QUARANTINE.

Vessels fumigated with cyanide gas.....	19
Cyanide used in cyanide-gas fumigation (pounds).....	736
Sulphuric acid used in cyanide-gas fumiga- tion (pints).....	1,104
Clean bills of health issued.....	34

FIELD OPERATIONS.

Rodents trapped.....	6,796
Premises fumigated.....	1
Premises inspected.....	7,034
Notices served.....	548
Garbage cans installed.....	5

BUILDINGS RAT PROOFED.

By elevation.....	137
By marginal concrete wall.....	160
By concrete floor and wall.....	172
By minor repairs.....	21
Total buildings rat proofed.....	690

BUILDINGS RAT PROOFED—continued.

Concrete laid (square yards).....	3,532
Premises, planking, and shed flooring re- moved.....	53
Buildings demolished.....	123
Total buildings rat proofed to date (about) 11 ¹ , 273	

LABORATORY OPERATIONS.

Rodents received, by species:

Mus rattus.....	4
Mus norvegicus.....	1,077
Mus alexandrinus.....	111
Mus musculus.....	4,913
Wood rats.....	1
Musk rats.....	14
Putrid (included in enumeration of species).....	123
Total rodents received at laboratory.....	6,333
Rodents examined.....	1,383
Number of rats suspected of plague.....	123
Plague rats confirmed.....	1

¹ Report for week ended June 24, 1916, not received.² Indicates the number of rodents the tissues of which were inoculated into guinea pigs. Most of them showed on necropsy only evidence of recent inflammatory process; practically none presented gross lesions characteristic of plague infection.

PLAGUE RATS.

Case No.	Address.	Captured.	Diagnosis confirmed.	Treatment of premises.
301	St. Mary and Camp Place.	May 31, 1916	June 25, 1916	Intensive trapping. Rat proofing of adjoining premises.
302	North Peters and Bien-ville Streets.	June 16, 1916	.....do.....	Fumigation with cyanide. Intensive trapping.
303	No. 53 Fourth Street (Harvey, La.).	June 12, 1916	June 27, 1916	Intensive trapping.
304	No. 2605 Tchoupitoulas Street.	.....do.....	June 29, 1916	Intensive trapping. Removal of rubbish and debris; rat proofing repairs to shed.
305	Sixth and Derbigny Streets (Gretna, La.)	June 1, 1916	.....do.....	Intensive trapping.
306	No. 2908 Gravier Street.	June 17, 1916	June 30, 1916	Intensive trapping; removal of rubbish and debris; demolition of non-rat-proof stable.
307	No. 1525 Dryades Street	June 16, 1916	.....do.....	Repair of all defects; removal of rubbish and debris. Intensive trapping of neighborhood.
308	North Peters and Bien-ville Streets.	May 24, 1916	.....do.....	Repair of all defects; fumigation with cyanide.
309	No. 515 Magazine Street	June 6, 1916	.....do.....	Fumigation with cyanide.
310	Melpomene and Broad Streets.	June 12, 1916	.....do.....	Intensive trapping.
311	No. 223 Poydras Street	June 15, 1916	.....do.....	Fumigation with cyanide; removal of debris and rubbish; repair to defects. Intensive trapping.

PLAGUE STATUS TO JULY 1, 1916

Last case of human plague, Sept. 8, 1915.

Last case of rodent plague, June 17, 1916.

Total number of rodents captured to July 1. 761,056

Total number of rodents examined to July 1 366,393

PLAGUE STATUS TO JULY 1, 1916—continued.

Total cases of rodent plague to July 1, by species:

Mus musculus.....	6
Mus rattus.....	19
Mus alexandrinus.....	13
Mus norvegicus.....	270

Total rodent cases to July 1, 1916.... 311

HAWAII—PLAGUE PREVENTION.

The following reports of plague-prevention work in Hawaii were received from Surg. Trotter, of the United States Public Health Service:

Honolulu.

WEEK ENDED JUNE 17, 1916.

Total rats and mongoose taken.....	326	Classification of rats trapped—Continued.	
Rats trapped.....	320	Mus musculus.....	115
Mongoose trapped.....	1	Mus norvegicus.....	43
Rats killed by sulphur dioxide.....	4	Mus rattus.....	13
Rats found dead (Mus norvegicus).....	1	Classification of rats killed by sulphur dioxide:	
Examined microscopically.....	249	Mus alexandrinus.....	4
Examined macroscopically.....	77	Average number of traps set daily.....	984
Showing plague infection.....	None.	Cost per rat destroyed.....cents..	24
Classification of rats trapped:			
Mus alexandrinus.....	149		

WEEK ENDED JUNE 24, 1916.

Total rats and mongoose taken.....	407	Classification of rats trapped—Continued.	
Rats trapped.....	401	Mus norvegicus.....	44
Mongoose trapped.....	6	Mus rattus.....	19
Examined microscopically.....	159	Average number of traps set daily.....	154
Examined macroscopically.....	73	Cost per rat destroyed.....	19 1/2 cents.
Showing plague infection.....	None.	Last case rat plague, Aiea, 9 miles from Honolulu,	
Classification of rats trapped:		Apr. 12, 1910.	
Mus alexandrinus.....	161	Last case human plague, Honolulu, July 12, 1910.	
Mus musculus.....	177		

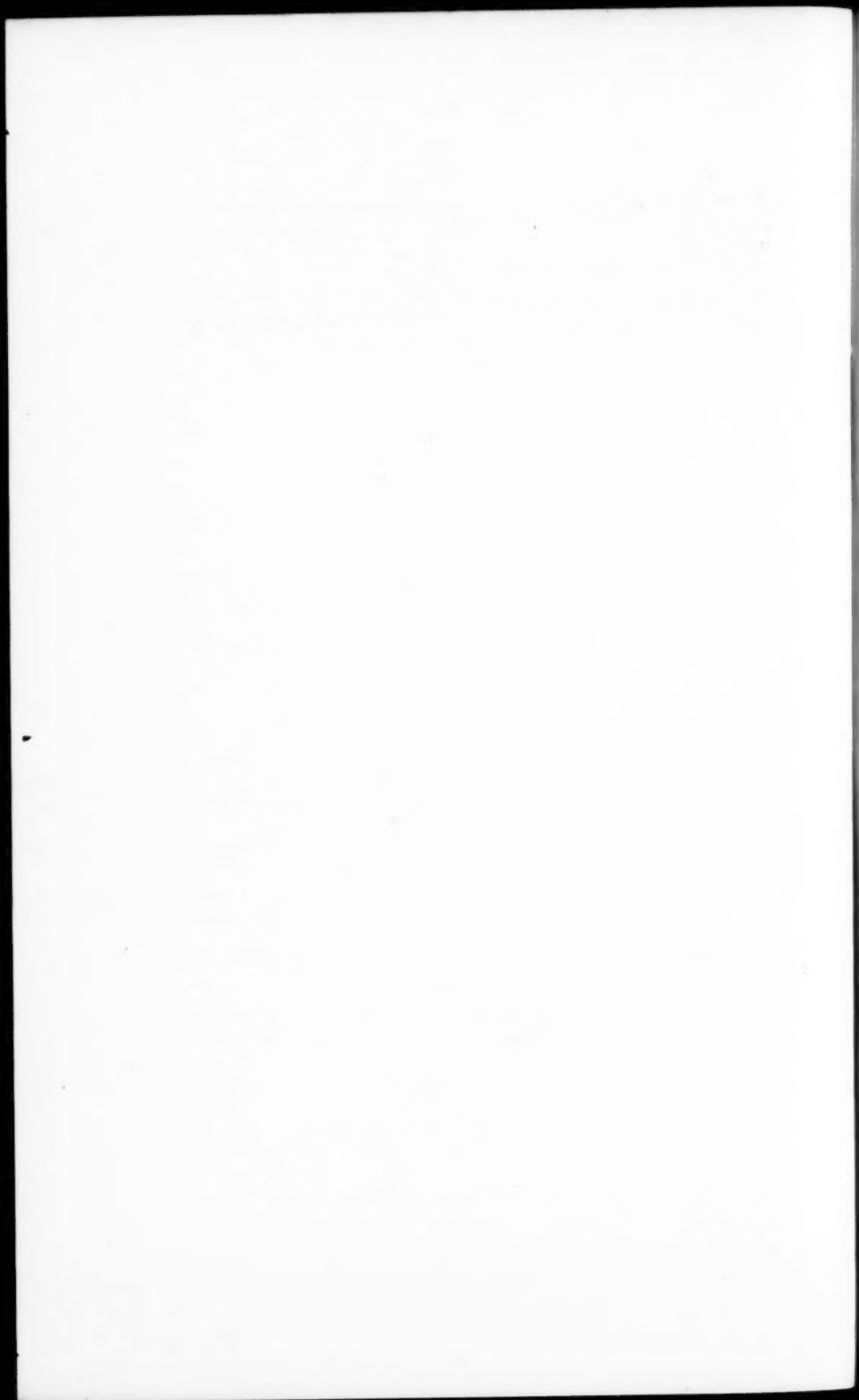
1929

July 21, 1916

Hilo.

WEEK ENDED JUNE 17, 1915.

Rats and mongoose taken.....	2,460	Classification of rats trapped and found dead:	
Rats trapped.....	2,490	Mus norvegicus.....	706
Rats found dead.....	8	Mus alexandrinus.....	283
Mongoose taken.....	52	Mus rattus.....	532
Rats and mongoose examined macroscopically.....	2,460	Mus musculus.....	884
Rats and mongoose examined microscopically.....	1	Last case of rat plague, Paauhau Sugar Co., Jan. 14, 1916.	
Rats and mongoose plague infected.....	None.	Last case of human plague, Paauhau Sugar Co., Dec. 16, 1915.	



PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CEREBROSPINAL MENINGITIS.

State Reports for June, 1916.

Place.	New cases reported.	Place.	New cases reported.
District of Columbia.....	1	Wisconsin:	
Rhode Island:		Milwaukee County.....	9
Providence County—		Pierce County.....	1
Providence.....	2	Trempealeau County.....	1
		Waupaca County.....	2
		Total.....	13

City Reports for Week Ended July 1, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....		1	Pawtucket, R. I.....		1
Boston, Mass.....	3	6	Pittsburgh, Pa.....	1	
Buffalo, N. Y.....	1		Plainfield, N. J.....	2	1
Chicago, Ill.....	2	1	Quincy, Ill.....	1	1
Cincinnati, Ohio.....	1		St. Louis, Mo.....	3	2
Cleveland, Ohio.....	2	1	Salt Lake City, Utah.....	1	1
Dubuque, Iowa.....	1	1	Springfield, Ill.....		1
Lawrence, Mass.....	1	1	Washington, D. C.....	1	1
Madison, Wis.....		1	Worcester, Mass.....	1	
New York, N. Y.....	8	8			

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1939.

ERYSIPELAS.

City Reports for Week Ended July 1, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Beaver Falls, Pa.....	1		New York, N. Y.....		2
Boston, Mass.....		3	Passaic, N. J.....	1	
Buffalo, N. Y.....	4	1	Philadelphia, Pa.....	7	1
Chelsea, Mass.....		1	Pittsburg, Ia.....	11	1
Chicago, Ill.....	15	1	Portland, Ore.....	1	
Cleveland, Ohio.....	1		Quincy, Ill.....	2	
Detroit, Mich.....	5	1	Reading, Ia.....	1	
Duluth, Minn.....	2		St. Louis, Mo.....	8	1
Jersey City, N. J.....		1	St. Paul, Minn.....	1	
Los Angeles, Cal.....	2		San Francisco, Cal.....	3	
Milwaukee, Wis.....	3		Seattle, Wash.....	1	
Nashville, Tenn.....	1		Tacoma, Wash.....	1	
New Bedford, Mass.....		1			

MALARIA.**Maryland Report for June, 1916.**

During the month of June, 1916, there were reported 7 cases of malaria in the State of Maryland.

City Reports for Week Ended July 1, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Berkeley, Cal.	1		Nashville, Tenn.		1
Birmingham, Ala.		1	New Orleans, La.	1	1
Camden, N. J.	4		Newton, Mass.	1	
East Orange, N. J.	1		New York, N. Y.		2
Hartford, Conn.	1		Philadelphia, Pa.	1	
Jersey City, N. J.	1		Plainfield, N. J.	1	
Little Rock, Ark.	1		Taunton, Mass.		1
Mobile, Ala.		1	Worcester, Mass.	1	
Montclair, N. J.	1				

MEASLES.**Washington—Seattle.**

Surg. Boggess reported that during the week ended July 8, 1916, 89 cases of measles, with 1 death, were notified in Seattle, Wash., making a total of 5,245 cases, with 9 deaths, reported since the beginning of the epidemic February 15, 1916.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 1939.

PELLAGRA.**City Reports for Week Ended July 1, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.	1	1	Nashville, Tenn.	34	
Charleston, S. C.		2	New Orleans, La.	1	1
Chicago, Ill.		1	Richmond, Va.		1
Little Rock, Ark.	1		Wichita, Kans.	1	
Mobile, Ala.		3	Wilmington, N. C.	6	1

PLAGUE.**California—San Mateo County—Plague-Infected Squirrel Found.**

Senior Surg. Pierce reported that a ground squirrel shot in San Mateo County, Cal., June 21, 1916, was proven positive for plague infection July 6, 1916.

Louisiana—New Orleans—Plague-Infected Rats Found.

Passed Asst. Surg. Simpson reported the finding of 2 additional plague-infected rats at New Orleans, La., as follows: One trapped June 29, 1916, at 2831 Dumaine Street, was proven positive for plague infection July 8, 1916; another rat trapped June 13, at 2639 Dumaine Street, was proven positive for plague infection July 10, 1916.

1933

July 21, 1916

PNEUMONIA.

City Reports for Week Ended July 1, 1916.

Place.	Cases.	Deaths.	Place	Cases.	Deaths.
Ann Arbor, Mich.....	1	.....	Manchester, N. H.....	2	2
Binghampton, N. Y.....	1	1	Morristown, N. J.....	1	.....
Canton, Ohio.....	1	.....	New Castle, Pa.....	1	.....
Chicago, Ill.....	68	43	Newport, Ky.....	2	2
Cleveland, Ohio.....	10	7	Norfolk, Va.....	1	1
Detroit, Mich.....	6	4	Philadelphia, Pa.....	14	9
Kalamazoo, Mich.....	2	.....	Pittsburgh, Pa.....	11	7
Kansas City, Mo.....	2	4	Rochester, N. Y.....	6	2
Lorain, Ohio.....	1	.....	San Francisco, Cal.....	7	5
Los Angeles, Cal.....	3	1	Stockton, Cal.....	2	.....

POLIOMYELITIS (INFANTILE PARALYSIS).

Colorado.

The State health officer of Colorado reported July 13: One case poliomyelitis in Boulder County. July 14: One case in Denver.

Connecticut.

The State health officer of Connecticut reported July 20: 30 cases poliomyelitis during last five days. Total to date, 55 cases with 14 deaths. Cases are scattered, mostly New York refugees.

Florida.

The State health officer of Florida reported July 17: Case poliomyelitis reported at Raiford, this State, on investigation doubtful.

Illinois.

The State health officer of Illinois reported July 15: Acute poliomyelitis in Illinois to date, 1 case each at Chanai, near Cherry, Dalton City, Eureka, Freeport, Gibson City, Kankakee, near Maroa, near Oregon, Quincy, and Streator; 11 cases at Chicago, 1 suspected case at Belleville, and 1 at Granville; reported case at Simpson being investigated. July 17: New cases acute poliomyelitis reported since July 8 and confirmed by our inspectors are: Near Beech City 1, Simpson 1, Chicago 2; 1 case each reported at Lovington, Carrier Mills, Olive Branch, Sidney, and Tamms; they are being investigated. July 18: Reports of cases of poliomyelitis in Illinois confirmed since report of yesterday are: One each at Chicago, Lovington, Olive Branch, Sidney, and Tamms; now under investigation, 1 each at Benld, Carrier Mills, Chicago, near Dimmick, Elizabethtown, Frankfort Heights, Kansas, St. Libory, and Waco; 2 deaths reported since July 1, the cases near Cherry and at Simpson.

Olive Branch and Tamms.—Senior Surg. Gassaway reported July 17: One poliomyelitis, male, white, 2 years, reported Olive Branch, recognized July 13, died July 14. One at Tamms, white, 3 years, recognized July 16.

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**Kansas.**

Collaborating Epidemiologist Crumbine reported July 14: One case poliomyelitis notified from Larned, Kans. July 17: One case notified from Garden City, one from Wellington. July 18: One case notified from Salina.

Kentucky.

Louisville.—Passed Asst. Surg. Herring reported July 17: Ten cases poliomyelitis reported in Louisville since July 8; no deaths.

Maryland.

Baltimore.—Surg. Vogel reported July 18: Health department confirms third case poliomyelitis, G. J., 33 months, 617 West Hamburg Street, recently arrived from New York. Case and premises quarantined.

Mississippi.

Collaborating Epidemiologist Stingily reported July 12: Eight cases infantile paralysis reported from Marion County, 3 deaths.

Montana.

The State health officer of Montana reported July 13: Case poliomyelitis reported from Crow Reservation, 11 miles south of Hardin.

Ohio.

Cincinnati.—Asst. Surg. Bolten reported July 12: Case suspected poliomyelitis 7 months old child reported by board of health, examination of spinal fluid suspicious.

Cleveland.—Surg. Holt reported July 18: Six cases, one death poliomyelitis last week. Total 12 cases, with 2 deaths, cases all in residents.

New Jersey.

Perth Amboy.—Acting Asst. Surg. Naulty reported July 14: The following cases of poliomyelitis have occurred in this city; one case June 12, 2 cases July 10, 1 case July 14. Total cases to date 4, with 1 death.

New York.

Buffalo.—Surg. Gardner reported July 14: One case poliomyelitis reported Buffalo, imported direct from New York.

New York City.—Surg. Lavinder reported July 14: 162 new cases poliomyelitis, 31 deaths. July 15: 144 new cases, 27 deaths. July 16: No official figures Sunday, but 96 cases and 17 deaths reported. July 17: 95 new cases, 14 deaths. Total to date 2,054 cases, 400 deaths.

1935

July 21, 1916

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

Rhode Island.

Providence.—Passed Asst. Surg. Marshall reported July 17: Up to the present date there have occurred in this city 3 cases of anterior poliomyelitis with 1 death. One of these cases came from New York City July 1, 1916.

South Carolina.

Asst. Surg. Wynne reported July 18: Two cases poliomyelitis reported in Greenville, one strongly suspicious case, all three widely separated, sporadic type.

West Virginia.

The State board of health of West Virginia reported July 14: One case poliomyelitis reported in West Virginia during the past week.

Rhode Island Report for June, 1916.

During the month of June, 1916, two cases of poliomyelitis were reported at Newport, Newport County, R. I.

City Reports for Week Ended July 1, 1916.

Place.	Cases	Deaths.	Place.	Cases.	Deaths.
Bayonne, N. J.	1	.....	Los Angeles, Cal.	1	.....
Chicago, Ill.	4	1	Newport, R. I.	2	.....
Cleveland, Ohio.	2	.....	New York, N. Y.	255	59
Evansville, Ind.	1	.....	Philadelphia, Pa.	1	.....
Grand Rapids, Mich.	1	.....	Stockton, Cal.	1	.....
Lincoln, Nebr.	.....	1	Wilkes-Barre, Pa.	1	.....

RABIES IN MAN.

City Reports for Week Ended July 1, 1916.

During the week ended July 1, 1916, one case of rabies was reported at Worcester, Mass.

RABIES IN ANIMALS.

City Reports for Week Ended July 1, 1916.

During the week ended July 1, 1916, two cases of rabies in animals were reported at St. Paul, Minn.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1939.

July 21, 1916

1936

SMALLPOX.

Washington—Seattle.

Surg. Boggess reported that during the week ended July 8, 1916, one case of smallpox was notified in Seattle, Wash., making a total of 62 cases reported since May 29, 1916.

State Reports for June, 1916.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Maryland:						
Washington County—						
Big Pool.....	1	.....	.....	.....	1	.....
Hagerstown.....	1	.....	.....	.....	1	.....
Total.....	2	.....	.....	.....	2	.....
Wisconsin:						
Bayfield County....	5	.....	.....	.....	.....	5
Brown County.....	1	.....	1	.....	.....	.....
Chippewa County....	9	.....	.....	.....	5	4
Douglas County.....	1	.....	.....	.....	.....	1
Jackson County.....	18	.....	.....	.....	9	9
Manitowoc County...	2	.....	.....	.....	2	.....
Milwaukee County...	1	.....	.....	.....	.....	1
Price County.....	1	.....	.....	.....	.....	1
Shawano County....	2	.....	.....	.....	.....	2
Waukesha County...	1	.....	.....	.....	1	.....
Waupaca County....	7	.....	.....	.....	5	2
Winnebago County..	3	.....	.....	.....	3	.....
Total.....	51	.....	1	.....	25	25

Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Arkansas (May 1-31):			Arkansas (May 1-31)—Contd:		
Counties—			Counties—Continued—		
Garland.....	11	.....	St. Francis.....	4	.....
Howard.....	1	.....	Stone.....	15	.....
Marion.....	18	.....	Total.....	75	.....
Perry.....	2	.....	Vermont (June 1-30):		
Phillips.....	20	.....	Orleans County—		
Pulaski.....	3	.....	Albany.....	1	.....
Saline.....	1	.....		

City Reports for Week Ended July 1, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Butte, Mont.....	2	.....	Muscatine, Iowa.....	2	.....
Cincinnati, Ohio.....	1	.....	New Orleans, La.....	1	.....
Detroit, Mich.....	14	.....	Oklahoma, Okla.....	3	.....
Duluth, Minn.....	1	.....	St. Louis, Mo.....	1	.....
Galveston, Tex.....	2	.....	St. Paul, Minn.....	5	.....
Grand Rapids, Mich.....	3	.....	Seattle, Wash.....	11	.....
Kansas City, Kans.....	7	.....	South Bend, Ind.....	5	.....
Kansas City, Mo.....	1	.....	Springfield, Ill.....	12	.....
Kokomo, Ind.....	11	.....	Toledo, Ohio.....	4	.....
Little Rock, Ark.....	1	.....	Wichita, Kans.....	1	.....

1937

July 21, 1916

TETANUS.

City Reports for Week Ended July 1, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....	1	.....	New York, N. Y.....	1	.....
Detroit, Mich.....	.....	6	St. Louis, Mo.....	1	.....
El Paso, Tex.....	1	1	Trenton, N. J.....	1	1
Mobile, Ala.....	.....	2	Troy, N. Y.....	1	1

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1939.

TYPHOID FEVER.

State Reports for June, 1916.

Place.	New cases reported.	Place.	New cases reported.
District of Columbia.....	14	Maryland—Continued.	
Maryland:		St. Marys County—	
Baltimore.....	39	Mechanicsville R. F. D.....	1
Allegany County—		Somerset County—	
Westernport.....	4	Crisfield.....	1
Cumberland.....	4	Dames Quarter.....	1
Frostburg.....	1	Chance.....	3
Anne Arundel County—		Loretto R. F. D.....	1
Traceys Landing.....	1	Talbot County—	
Lothian.....	1	Trappe.....	1
Eastport.....	1	Washington County—	
Baltimore County—		Hagerstown.....	5
Highlandtown.....	6	Williamsport.....	1
Lauraville.....	1	Fiddlersburg R. F. D.....	1
Parkton R. F. D.....	1	Wicomico County—	
Morrell Park.....	3	Fruitland R. F. D.....	1
St. Agnes Hospital.....	1	Whiton R. F. D.....	1
Baldwin R. F. D.....	1	Worcester County—	
Lutherville.....	1	Snow Hill.....	1
Halethorpe.....	1	Pocomoke City R. F. D.....	1
Calvert County—		Total.....	120
Huntingtown.....	1		
Poplars.....	1	Rhode Island:	
Owings R. F. D.....	1	Newport County—	
Caroline County—		Newport.....	2
Federalburg.....	1	Providence County—	
Ridgely.....	1	East Providence.....	1
Cecil County—		Providence.....	6
Charlestown.....	1	Washington County—	
North East R. F. D.....	1	Exeter.....	1
Colona.....	1	Richmond.....	1
Charles County—		Scituate.....	1
Hughesville.....	1	Total.....	12
Mount Victoria.....	1		
Dorchester County—		Vermont:	
Thomas.....	1	Franklin County.....	1
Cambridge.....	4	Orleans County.....	1
Hurlock.....	1	Rutland County.....	1
Cambridge Hospital.....	1	Total.....	3
Ellikots.....	1		
Hollands Island.....	1	Wisconsin:	
Frederick County—		Bayfield County.....	1
Jefferson.....	1	Chippewa County.....	1
Frederick.....	1	Door County.....	1
Burkittsville.....	2	Douglas County.....	17
Howard County—		Eau Claire County.....	1
Ellicott City R. F. D.....	1	Kenosha County.....	2
Kent County—		Marathon County.....	1
Chester town.....	1	Milwaukee County.....	12
Montgomery County—		Sheboygan County.....	1
Laytonsville R. F. D.....	1	Wood County.....	1
Sandy Springs.....	2	Total.....	18
Prince Georges County—			
Brentwood.....	2		
Mount Rainier.....	1		
Muirkirk.....	1		
Aquasco.....	1		
Queen Annes County—			
Crumpton R. F. D.....	1		
Queenstown R. F. D.....	1		

TYPHOID FEVER—Continued.

City Reports for Week Ended July 1, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.	8	2	Mobile, Ala.	1	
Birmingham, Ala.	102	2	Nashville, Tenn.	21	1
Boston, Mass.	7	1	New Bedford, Mass.	1	
Buffalo, N. Y.	5		New Britain, Conn.		1
Cambridge, Mass.	1		New Castle, Pa.	1	
Charleston, S. C.	14	2	New London, Conn.	3	
Chicago, Ill.	12		New Orleans, La.	6	1
Cleveland, Ohio.	1	1	Newport, R. I.	1	
Columbus, Ohio.	16	2	Newton, Mass.		
Covington, Ky.	1		New York, N. Y.	29	1
Cumberland, Md.	1		Norfolk, Va.	1	1
Danville, Ill.	4		Norristown, Pa.	1	
Detroit, Mich.	4		Omaha, Nebr.		1
Duluth, Minn.	3		Orange, N. J.	1	
Elgin, Ill.	3		Philadelphia, Pa.	30	3
El Paso, Tex.	2		Pittsburgh, Pa.	6	
Evansville, Ind.		1	Plainfield, N. J.	1	
Fort Wayne, Ind.	1		Portland, Oreg.	1	
Galveston, Tex.	15		Providence, R. I.	1	1
Hartford, Conn.	1		Reading, Pa.	1	
Jersey City, N. J.		1	Richmond, Va.		1
Kalamazoo, Mich.	1		St. Louis, Mo.	4	
Kansas City, Mo.	2		St. Paul, Minn.	2	
Knoxville, Tenn.	10		Salt Lake City, Utah.	2	
Kokomo, Ind.	1		San Francisco, Cal.	2	
Lancaster, Pa.	1		South Bend, Ind.	1	
Lawrence, Mass.	2		Syracuse, N. Y.	1	
Little Rock, Ark.	6		Troy, N. Y.	2	1
Los Angeles, Cal.	7		Washington, D. C.	1	2
Lowell, Mass.	1		Wheeling, W. Va.	1	1
Manchester, N. H.	1	1	Williamsport, Pa.	2	
Milwaukee, Wis.	2	1	Wilmington, Del.	2	

TYPHUS FEVER.

Arizona—Florence and Seligman.

The superintendent of health of Arizona reported by telegraph July 18, 1916, that three cases of typhus fever had been notified at Florence, and two cases at Seligman, Ariz.

California—Los Angeles.

The State board of health of California reported by telegraph July 18, 1916, that a fatal case of typhus fever had been notified at Los Angeles, Cal., in the person of a Mexican, who arrived from Seligman, Ariz., July 13, and died July 14, 1916.

Texas—El Paso.

Acting Asst. Surg. Tappan reported by telegraph July 16, 1916, that one new case of typhus fever was notified at El Paso, Tex., in a person arrived from Guanajuato, Mexico, July 1, 1916.

City Reports for Week Ended July 1, 1916.

During the week ended July 1, 1916, typhus fever was reported by cities as follows: One case at Jersey City, N. J., and one death at Hartford, Conn.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for June, 1916.

Place.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
District of Columbia.....	22	605	18
Maryland.....	69	1,840	111
Rhode Island.....	81	259	92
Vermont.....	12	533	34
Wisconsin.....	98	1,588	248

City Reports for Week Ended July 1, 1916.

City.	Population as of July 1, 1915. (Estimated by United States Census Bureau.)	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
Over 500,000 inhabitants:											
Baltimore, Md.....	584,605	182	6	—	49	—	15	—	36	26	
Boston, Mass.....	745,139	214	41	4	226	4	21	1	75	22	
Chicago, Ill.....	2,447,045	561	136	17	153	7	110	2	298	77	
Cleveland, Ohio.....	656,975	149	20	—	79	4	11	1	45	18	
Detroit, Mich.....	554,717	193	70	4	17	2	31	2	27	11	
New York, N. Y.....	5,468,190	1,294	363	21	547	6	111	2	386	140	
Philadelphia, Pa.....	1,683,664	453	51	11	179	3	26	1	157	36	
Pittsburgh, Pa.....	571,984	132	7	—	124	1	12	—	23	15	
St. Louis, Mo.....	745,988	182	24	2	125	1	12	—	43	16	
From 300,000 to 500,000 inhabitants:											
Buffalo, N. Y.....	461,335	152	12	1	7	—	14	—	37	20	
Cincinnati, Ohio.....	406,706	105	14	1	23	—	4	—	32	15	
Jersey City, N. J.....	300,133	54	13	—	10	2	15	—	19	3	
Los Angeles, Cal.....	465,367	122	7	—	45	—	5	—	33	19	
Milwaukee, Wis.....	428,062	77	5	1	29	—	30	2	21	5	
New Orleans, La.....	386,484	—	6	—	26	—	—	—	38	26	
San Francisco, Cal.....	416,912	120	8	—	3	—	12	—	12	21	
Seattle, Wash.....	330,834	40	1	—	201	—	1	—	20	5	
Washington, D. C.....	358,679	112	2	—	166	—	3	—	18	10	
From 200,000 to 300,000 inhabitants:											
Columbus, Ohio.....	203,722	72	3	—	29	1	4	—	9	5	
Kansas City, Mo.....	289,879	—	4	—	23	—	9	—	—	4	
Portland, Oreg.....	272,833	33	1	—	14	—	5	—	5	5	
Providence, R. I.....	250,025	99	7	1	10	—	2	—	7	7	
Rochester, N. Y.....	250,747	89	3	—	69	—	—	—	14	9	
St. Paul, Minn.....	241,999	43	11	—	41	—	5	—	12	7	
From 100,000 to 200,000 inhabitants:											
Albany, N. Y.....	103,580	—	1	—	19	—	2	—	11	—	
Birmingham, Ala.....	174,108	68	—	—	2	—	1	—	—	7	
Cambridge, Mass.....	111,669	—	3	1	47	—	1	—	1	4	
Camden, N. J.....	104,349	—	4	—	2	—	—	—	2	—	
Fall River, Mass.....	126,904	21	1	1	—	—	1	—	6	1	
Grand Rapids, Mich.....	125,759	—	2	—	11	—	8	—	3	—	
Hartford, Conn.....	108,969	—	5	—	5	—	—	—	6	2	
Lowell, Mass.....	112,124	35	3	—	12	—	—	—	3	2	
Lynn, Mass.....	100,316	19	—	1	—	—	—	—	—	1	
Nashville, Tenn.....	115,978	40	—	—	18	—	—	—	2	2	
New Bedford, Mass.....	114,694	35	1	—	6	—	2	—	7	4	
New Haven, Conn.....	147,095	—	—	—	13	—	1	—	8	3	
Omaha, Nebr.....	—	32	9	—	7	—	1	—	—	3	
Reading, Pa.....	105,094	21	—	—	1	—	2	—	8	3	
Richmond, Va.....	154,674	74	—	—	88	3	2	—	7	6	
Salt Lake City, Utah.....	113,567	17	2	—	101	—	4	—	—	—	
Springfield, Mass.....	103,216	20	1	—	29	—	6	—	4	3	
Syracuse, N. Y.....	152,534	44	7	—	20	—	3	—	10	3	
Tacoma, Wash.....	108,094	—	1	—	37	—	1	—	—	—	
Toledo, Ohio.....	187,840	58	10	2	19	—	13	—	—	6	
Trenton, N. J.....	109,212	24	7	—	—	—	3	—	7	3	
Worcester, Mass.....	163,523	—	11	2	50	4	3	1	—	1	

Population Apr. 15, 1910; no estimate made.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended July 1, 1916—Continued.

City.	Population as of July 1, 1914. (Es- timated by United States Census Bureau.)	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhab- itants:										
Batonne, N. J.	67,582		4		11		3		3	
Berkeley, Cal.	51,879	4	1		1					2
Binghamton, N. Y.	53,042	18	12		22				3	3
Brockton, Mass.	65,746	13	3		8		2		7	1
Canton, Ohio	59,139	9			9		2		2	1
Charleston, S. C.	69,427	38								5
Chattanooga, Tenn.	58,576	16					3	1	1	1
Covington, Ky.	56,520	14	1		2		1		2	2
Duluth, Minn.	91,913		3		5		4			
Elizabeth, N. J.	84,550	17	2	1	1		5		4	3
El Paso, Tex.	51,936	36			2	1				2
Evansville, Ind.	72,125	18							8	2
Fort Wayne, Ind.	74,352	21			15		4		2	1
Harrisburg, Pa.	70,754	20			5				4	1
Hoboken, N. J.	76,104	10	6	1	3		7	1	2	1
Kansas City, Kans.	96,854						5		3	
Lancaster, Pa.	50,269		2		32					
Lawrence, Mass.	98,197	19	6		9		1		7	1
Little Rock, Ark.	55,158	19					1		1	
Malden, Mass.	50,067		1		9		1			
Manchester, N. H.	76,959	24	1						1	1
Mobile, Ala.	56,536	30			1				4	2
New Britain, Conn.	52,203	3					1		5	1
Norfolk, Va.	88,076				11		1		4	4
Oklahoma, Okla.	88,158	13			8		2			
Passaic, N. J.	69,010	17	2		1		1		1	
Pawtucket, R. I.	58,156	15	1							
Rockford, Ill.	53,761	11	1		1		1		1	
Sacramento, Cal.	64,806	15	1						5	3
San Diego, Cal.	51,115	23	4		33		1		4	3
Schenectady, N. Y.	95,265	26	2		6		3		1	3
Somerville, Mass.	85,460	16			10		3		3	3
South Bend, Ind.	67,030	10			3		2			2
Springfield, Ill.	59,468	13	6		1		2			
Springfield, Ohio	50,804	15			4		2		3	2
Troy, N. Y.	77,738				15		3		4	6
Wichita, Kans.	67,847				1		1	1		
Wilkes-Barre, Pa.	75,218	16	2		3		2		1	
Wilmington, Del.	93,161		1		2		3			
York, Pa.	50,543		1		3				4	
From 25,000 to 50,000 inhabitants.										
Alameda, Cal.	27,031	3	2				1			2
Auburn, N. Y.	36,947	11	3	2	14		1			1
Brookline, Mass.	31,934	2	2		2		2		1	
Butler, Pa.	26,587	6	3		6					
Butte, Mont.	42,918	24	1		6	1			11	6
Chelsea, Mass.	32,452	13			4		1		4	
Chicopee, Mass.	28,688	7	1		17		3		3	
Clinton, Iowa	27,094	2			1		4		1	
Cumberland, Md.	25,564	2			3				2	
Danville, Ill.	31,554	7					1			
Davenport, Iowa	47,127		3				6			
Dubuque, Iowa	39,650				13		4		2	2
East Orange, N. J.	41,155	6	1		41		3		4	1
Elgin, Ill.	27,844	2			1				1	
Everett, Mass.	38,307	6	2						7	1
Everett, Wash.	33,767	5			4				1	
Fitchburgh, Mass.	41,144	8			45				2	
Galveston, Tex.	41,076	14							3	1
Haverhill, Mass.	47,774	12	7		7		1		3	1
Kalamazoo, Mich.	47,364	14			25				1	
Kenosha, Wis.	30,319	3			55	1				
Knoxville, Tenn.	38,300				4				4	
La Crosse, Wis.	31,522	7	3	1			1		1	1
Lexington, Ky.	39,703	6					2			
Lima, Ohio	34,644	3	2		1		1			
Lincoln, Nebr.	46,028	13			1		3		1	
Lorain, Ohio	35,662		1		14		2			

* Population Apr. 15, 1910; no estimate made.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended July 1, 1916—Continued.

City.	Population as of July 1, 1915. (Es- timated by United States Census Bureau.)	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tubercu- losis.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
From 25,000 to 50,000 inhab- itants—Continued.											
Lynchburg, Va.	32,385	15			4					2	
Madison, Wis.	30,084									1	
Medford, Mass.	25,737	8							2		
Montclair, N. J.	25,550	5	1		8				2	2	
New Castle, Pa.	40,351		4		4						
Newport, Ky.	31,722	11							1	1	
Newport, R. I.	29,631	3	2		3		1			1	
Newton, Mass.	43,085	7	1		16		1				
Niagara Falls, N. Y.	36,240	9	2		8				5		
Norristown, Pa.	30,833	4	3		1						
Ogden, Utah	30,466	9			1		7				
Orange, N. J.	32,524	10	3		11				2		
Pasadena, Cal.	43,859	7			3				5	1	
Perth Amboy, N. J.	39,725								1		
Pittsfield, Mass.	37,580	11	1		1		1		3	1	
Quincy, Ill.	36,764	10	2		1						
Racine, Wis.	45,507		1		3						
Roanoke, Va.	41,929	10	1		18						
Rock Island, Ill.	27,961	5					1				
San Jose, Cal.	37,994	9	2				1			2	
Steubenville, Ohio.	26,631	8	3				2				
Stockton, Cal.	34,508	6	1								
Superior, Wis.	45,285	6			8		1				
Taunton, Mass.	35,957	12			1				3		
Waltham, Mass.	30,129	5	7		3					2	
West Hoboken, N. J.	41,893	5			2		1		4		
Wheeling, W. Va.	43,097	12			6				1		
Williamsport, Pa.	33,495		2								
Wilmington, N. C.	28,264	12					2			1	
Zanesville, Ohio.	30,403	12								1	
From 10,000 to 25,000 inhabitants:											
Ann Arbor, Mich.	14,979	5	2		1						
Beaver Falls, Pa.	13,316				2						
Braddock, Pa.	21,310		2				1		1		
Calro, Ill.	15,593	3			3						
Coffeyville, Kans.	16,765				3				1		
Concord, N. H.	22,480	8			19						
Galesburg, Ill.	23,923				28						
Harrison, N. J.	16,555								4		
Kearny, N. J.	22,733	6			7		3		2		
Kokomo, Ind.	20,312	3							1		
Long Branch, N. J.	15,057	7								1	
Marinette, Wis.	14,610				33						
Melrose, Mass.	17,166	2			1				1		
Morristown, N. J.	13,158		1		6		1		1		
Nanticoke, Pa.	22,441	3	1								
Newburyport, Mass.	15,195	4									
New London, Conn.	22,771	9	3		11		1				
North Adams, Mass.	12,019	5			6						
Northampton, Mass.	19,846	6			10				3		
Plainfield, N. J.	23,289	6	1				4		1		
Rutland, Vt.	14,624	5			1		5				
Sandusky, Ohio.	20,160				46				1		
Saratoga Springs, N. Y.	12,842	3	1								
Steelton, Pa.	15,537	9	1		2				1		
Wilkinsburg, Pa.	22,361	6			1		1				
Woburn, Mass.	15,862	2									

1 Population Apr. 15, 1910; no estimate made.

FOREIGN.

CHOLERA ON VESSEL.

Steamship "Pei-ho" at Suez and Tor.

The steamship *Pei-ho* arrived at Suez May 18, 1916, with history of cholera en route. The *Pei-ho* left Saigon, Indo-China, April 19, having on board 2,285 laborers from the Province of Anam, Indo-China, destined for Marseille. On April 30 the *Pei-ho* arrived at Colombo, Ceylon, and there disembarked the body of one of the group from Anam who had died on board of cholera. The *Pei-ho* carried a physician, but was not furnished with a disinfecting apparatus. At Colombo strict quarantine was maintained, and the water on board was changed. After leaving Colombo eight fatal cases of cholera developed on board, the cases occurring as follows: May 5, one case; May 6, two cases; May 12 and 16, each one case; May 17, three cases. The disease was confined to the group in which the first case occurred. The health of the crew and the European passengers remained good. On arrival at Suez, May 18, five suspect cases were found on board. These were reported positive May 20. The *Pei-ho* sailed May 20 for the quarantine station at Tor, and on May 22 landed there 95 cases of sickness, among which were 41 cases of cholera. From May 22 to June 3, inclusive, 112 cases of cholera were notified among passengers isolated from the *Pei-ho* at Tor. On June 7 a suspect case reported June 6 was declared positive for cholera, and the quarantine period for passengers on the *Pei-ho* was renewed to date from June 6. The total number of carriers found from the beginning of the outbreak was 44.

Cholera has been notified in Indo-China, the point of departure of the infected group on the *Pei-ho*, as follows: January 1 to February 29, 1916, 1,332 cases, with 762 deaths, of which 1,295 cases, with 738 deaths, occurred in the Province of Anam, in which the infected group originated.

CHILE.

Destruction of Rats—Antofagasta.

During the week ended June 18, 1916, 1,912 rats were destroyed at Antofagasta.

1943

July 21, 1916

CHINA.

Examination of Rats—Shanghai.

During the week ended June 10, 1916, 307 rats were examined at Shanghai. No plague infection was found.

The last plague-infected rat found at Shanghai was found during the week ended May 6, 1916.

Summary of Rat Examination, 1915—Shanghai.

Plague-infected rats were found at Shanghai in December, 1908. Since that date a complete plague survey has been maintained at Shanghai. During the year 1915, 12,618 rats were found dead and examined for plague infection. Of these, 76 were found plague infected as compared with 187, 249, 138, 95, 122, and 186 during the six preceding years. The number of rats trapped and destroyed at Shanghai during the year 1915 was 159,801, making, with the number found dead and examined, a total of 172,419 rats accounted for.

CUBA.

Communicable Diseases—Habana.

Communicable diseases were notified at Habana during the 10-day period ended June 30, 1916, as follows:

Disease.	New cases.	Deaths.	Remain- ing under treatment June 30, 1916.
Cerebrospinal meningitis.....	2	2	.....
Diphtheria.....	8	2	3
Leprosy.....	.....	1	245
Malaria.....	.....	.....	3
Measles.....	15	.....	18
Paratyphoid fever.....	1	.....	5
Scarlet fever.....	1	.....	2
Typhoid fever.....	14	1	54
Varicella.....	2	.....	5

ECUADOR.

Plague—Yellow Fever.

Plague.—During the month of May, 1916, 3 new cases of plague with 2 deaths were notified at Guayaquil. The disease was reported present during the same period in the country districts back of the coast towns of Bahia and Manta. Plague also crossed the Andes and appeared in epidemic form at Ambato, a town situated at an elevation of 7,000 feet.

Yellow fever.—During the month of May, 1916, 21 cases of yellow fever with 17 deaths were notified at Guayaquil.

UNION OF SOUTH AFRICA.

Lepers—Robben Island.

According to information dated June 7, 1916, 550 lepers were under detention at Robben Island, vicinity of Cape Town.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During Week Ended July 21, 1916.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary				Mar. 12-May 6, 1916: Cases, 425; deaths, 155.
Austria	Mar. 26-Apr. 8	2		
Bosnia-Herzegovina	Mar. 12-Apr. 29	397	147	
Hungary	Mar. 20-Apr. 2	2		
Ceylon:				
Colombo	May 14-20	38	5	
Egypt:				
Suez	May 18-20	5	2	
Tor, quarantine station	May 22-June 3	112	42	
India:				
Bombay	May 21-June 3	6	2	
Calcutta	May 21-27		56	
Benazada	May 14-20		2	
Rangoon	May 21-27	1	1	
Java				East Java, Apr. 8-14, 1916: Cases, 2; deaths, 2. West Java, Apr. 20-26: Cases, 28; deaths, 26.
Batavia	Apr. 20-26		26	
Malang	Apr. 8-14	2	2	
Turkey:				
Constantinople	June 14			Present among soldiers.
Smyrna	To June 14			Epidemic. Estimated number cases daily, 50.
At sea:				
Steamship Pei-ho	Apr. 19-30	1	1	From Saigon, Indo-China, for Marseille.
Do	May 5-17	8	8	From Colombo to Suez.

PLAGUE.

Ecuador:				
Ambato	May 1-31			Epidemic.
Bahia	do			Country district, vicinity of Bahia.
Guayaquil	do	3	2	
Manta	do			Country district, vicinity of Manta.
India:				
Bassein	May 14-20		30	
Bombay	May 21-June 3	111	100	
Calcutta	May 21-27		3	
Benazada	May 14-20		3	
Karachi	May 21-27	20	23	
Madras Presidency	May 21-June 3	32	22	
Moulmein	May 14-20		7	
Rangoon	May 14-27	49	45	
Java				East Java, Apr. 9-15, 1916: Cases, 33; deaths, 32.
Residencies—				
Kediri	Apr. 9-21	7	7	
Paseroean	do	3	2	
Surabaya	do	13	12	Surabaya city, and district.
Surakarta	do	10	11	
Straits Settlements:				
Singapore	May 7-20	2	1	

¹ From medical officers of the Public Health Service, American consuls, and other sources.

1945

July 21, 1916

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received During Week Ended July 21, 1916—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Rio de Janeiro.....	Apr. 9-May 13....	42	8	
Canada:				
Ontario—				
Niagara Falls.....	July 2-8.....	1		
Ceylon:				
Colombo.....	May 14-20.....	1		
China:				
Foochow.....	May 21-27.....			Present.
East Africa:				
Mombasa.....	Apr. 24-30.....	3	1	
Egypt:				
Cairo.....	Jan. 29-Feb. 4....	4		
France:				
Paris.....	May 14-27.....	5		
India:				
Bombay.....	May 21-27.....	45	22	
Calcutta.....	.....do.....		1	
Madras.....	May 21-June 3....	46	14	
Rangoon.....	May 14-27.....	35	22	
Java.....				
Batavia.....	Apr. 20-26.....	3	2	East Java, Apr. 8-14: Cases, 7;
Sittobondo.....	Apr. 8-14.....	1	1	deaths, 7. Mid-Java, Apr. 8-
Toebean and Bosjonegoro.....	.....do.....	6	6	14: Cases, 40; deaths, 4. West
				Java, Apr. 20-23: Cases, 25;
				deaths, 6.
Mexico:				
Vera Cruz.....	June 19-July 2....	5	5	
Netherlands:				
Amsterdam.....	May 28-June 3....	1		
Portugal:				
Lisbon.....	June 4-10.....	4		
Russia:				
Moscow.....	Apr. 30-May 20....	132	32	
Petrograd.....	Apr. 23-May 6....	62	10	
Spain:				
Madrid.....	May 1-31.....		13	
Valencia.....	May 21-June 3....	10	3	

TYPHUS FEVER.

Egypt:				
Cairo.....	Jan. 29-Feb. 4....	11	2	
Germany:				
Frankfort-on-Main.....	June 11-17.....		1	
Konigsberg.....	June 4-10.....	1		
Leipzig.....	.....do.....		1	
Greece:				
Saloniki.....	May 8-14.....	2		
Japan:				
Tokyo.....	June 5-8.....	26		Jan. 1-June 8, 1916: Cases, 417.
Java.....				East Java, Apr. 8-14, 1916: Cases,
Batavia.....	Apr. 20-21.....	30	8	2; deaths, 2. Mid-Java, Apr.
Samarang.....	Apr. 8-22.....	6	2	8-22: Cases, 17; deaths, 3. West
Surabaya.....	Apr. 8-14.....	2	2	Java, Apr. 20-23: Cases, 41;
				deaths, 10.
Russia:				
Moscow.....	Apr. 30-May 20....	538	24	
Petrograd.....	Apr. 23-May 6....	11	2	

YELLOW FEVER.

Ecuador:				
Guayaquil.....	May 1-31.....	21	17	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to 14, 1916.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo.....	May 7-13.....	5		
India:				
Bassein.....	Apr. 23-29.....		1	
Bombay.....	May 14-20.....		1	
Calcutta.....	May 7-13.....		36	
Benazda.....	Apr. 23-29.....		2	
Indo-China:				
Provinces—				Dec. 1-31, 1915: Cases, 510; deaths, 395. Jan. 1-Feb. 29, 1916: Cases 1,332; deaths, 762.
Anam.....	Dec. 1-31.....	493	388	
Do.....	Jan. 1-Feb. 29.....	1,295	738	
Cambodia.....	do.....	11	10	
Cochin China.....	do.....	6	1	
Tonkin.....	Dec. 1-31.....	17	7	
Do.....	Jan. 1-Feb. 29.....	20	13	
Saigon.....	May 1-21.....	39	3	
Java.....				West Java: Apr. 13-19, 1916: Cases, 17; deaths, 14.
Batavia.....	Apr. 13-19.....	17	14	
Persia:				
Foumen.....	May 9.....	3	2	Previously erroneously included in cases at Reht.
Philippine Islands:				
Manila.....	May 14-20.....	9	11	Not previously reported: Cases, 3; deaths, 1.
Provinces.....				May 1-27, 1916: Cases, 12; deaths, 10.
Laguna.....	May 21-June 10.....	14	7	
Lanac.....	May 28-June 3.....	110	88	
Mindoro.....	May 21-27.....	7	7	
Rizal.....	May 21-June 10.....	6	5	
Siam:				
Bangkok.....	May 15-27.....	4	4	

PLAGUE.

Ceylon:				
Colombo.....	Apr. 30-May 6.....	3	3	
Chile:				
Mejillones.....	May 28-June 3.....	1		
Antofagasta.....	June 4-10.....	1		
Egypt:				Jan. 1-June 8, 1916: Cases, 1,520; deaths, 747.
Alexandria.....	May 26-June 8.....	18	12	
Port Said.....	May 28-June 2.....	2	2	
Provinces—				
Assiout.....	May 27-June 8.....	8	7	
Beni-Souef.....	May 26-June 7.....	18	8	
Fayoum.....	May 26-June 8.....	81	34	
Girgeh.....	June 7.....	1		
Minieh.....	May 29-June 6.....	10	6	
India:				May 7-13, 1916: Cases, 1,502; deaths, 1,138.
Bassein.....	Apr. 23-May 13.....		75	
Bombay.....	May 14-20.....	93	85	
Calcutta.....	May 7-13.....		2	
Benazda.....	Apr. 23-29.....		3	
Karnachi.....	May 14-20.....	27	18	
Madras Presidency.....	May 14-20.....	32	21	
Mandalay.....	do.....		1	
Moulmein.....	Apr. 23-May 13.....		21	
Prome.....	do.....		1	
Rangoon.....	do.....	108	101	
Indo-China:				Dec. 1-31, 1915: Cases, 90; deaths, 70. Jan. 1-Feb. 29, 1916: Cases, 205; deaths, 133.
Provinces—				
Anam.....	Dec. 1-31.....	36	20	
Do.....	Jan. 1-Feb. 29.....	79	62	
Cambodia.....	Dec. 1-31.....	27	36	
Do.....	Jan. 1-Feb. 29.....	77	71	
Cochin China.....	Dec. 1-31.....	4	1	
Do.....	Jan. 1-Feb. 29.....	49	20	
Tonkin.....	Dec. 1-31.....	23	23	
Saigon.....	May 15-21.....	8	4	
Mauritius.....	Apr. 13.....	1		
Siam:				
Bangkok.....	Apr. 30-May 30.....	32	28	
Straits Settlements:				
Singapore.....	Apr. 30-May 6.....	1		

¹ For reports received from Jan. 1 to June 30, 1916, see Public Health Reports for June 30, 1916. The tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to 14, 1916—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Austria:				Feb. 13-19, 1916: Cases, 1,536.
Vienna:	May 27-June 10...	3	1	
Hungary:				
Budapest:	May 21-June 10...	22	12	
Brazil:				
Santos:	May 8-14.		1	
Canada:				
Toronto:	June 25-July 1...	2		
Ceylon:				
Colombo:	May 7-13.	1		
China:				
Antung:	May 22-28.	2		Present. Do.
Dairen:	May 21-27.	1		
Chungking:	May 7-13.			
Foochow:	do.			
Harbin:	May 2-8.	2		
Hongkong:	May 7-27.	41	29	
Tientsin:	May 14-20.	23	4	
Egypt:				
Alexandria:	May 28-June 3.	1		
Cairo:	Jan. 22-28.	1		
Germany:				
Breslau:	May 21-27.	1		
Great Britain:				
Cardiff:	June 4-17.	1	1	
London:	do.	1		
India:				
Bassein:	May 7-13.		2	
Bombay:	May 14-20.	51	17	
Calcutta:	May 7-13.		1	
Madras:	May 14-30.	20	5	
Rangoon:	Apr. 23-May 13.	93	17	
Indo-China:				Dec. 1-31, 1915: Cases, 74; deaths, 14. Jan. 1-Feb. 29, 1916: Cases, 134; deaths, 16.
Provinces--				
Anam:	Dec. 1-31.	48		
Do:	Jan. 1-Feb. 29.	24		
Cambodia:	Dec. 1-31.	19	13	
Do:	Jan. 1-Feb. 29.	37	14	
Cochin China:	Dec. 1-31.	1	1	
Do:	Feb. 1-29.	10		
Tonkin:	Dec. 1-31.	6		
Do:	Jan. 1-Feb. 29.	63	2	
Japan:				
Kobe:	May 29-June 11.	21	3	
Java:				Mid-Java, Apr. 1-7, 1916: Cases, 9; deaths, 2. West Java, Apr. 13-19, 1916: Cases, 23; deaths, 4.
Batavia:	Apr. 13-19.	1	1	
Mexico:				
Aguascalientes:	June 12-25.		21	
Frontera:	May 28-June 10.	4	1	
Guadalajara:	June 11-17.	35	9	
Mazatlan:	May 31-June 6.		4	
Tenosique:	June 14.			175 miles south of Frontera. Epl-
Vera Cruz:	June 4-11.		4	demic among troops.
Philippine Islands:				
Manila:	May 28-June 3.	1		
Porto Rico:				June 19-25, 1916: Cases, 33.
Aguas Buenas:	June 19-25.	5		
Arecibo:	do.	2		
Bayamon:	June 19-July 2.	2		
Naranjito:	June 26-July 2.	4		
Rio Piedras:	do.	1		
San Juan:	June 19-July 2.	24		
Toa Alta:	June 26-July 2.	12		
Portugal:				
Lisbon:	May 21-June 3.	4		
Russia:				
Riga:	Apr. 6-12.	1		
Siam:				
Bangkok:	May 24-30.	2		
Straits Settlements:				
Singapore:	Apr. 30-May 6.	2	1	
Switzerland:				
Basel:	May 13-June 3.	14		

July 21, 1916

1948

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to 14, 1916—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Austria.....				Feb. 13-26, 1916: Cases, 845.
Hungary.....				Feb. 21-Mar. 5, 1916: Cases, 35; deaths, 7.
Budapest.....	May 21-June 10....	13		
China:				
Harbin.....	May 2-8.....	1		
Tientsin.....	May 14-20.....		1	
Egypt:				
Alexandria.....	May 21-June 3....	86	55	
Cairo.....	Jan. 8-28.....	15	6	
Germany:				
Chemnitz.....	May 28-June 3....		1	
Hanover.....	May 7-13.....	2		
Greece:				
Saloniki.....	May 1-7.....		4	
Japan:				
Tokyo.....	May 22-June 4....	39		Jan. 1-June 4, 1916: Cases, 391.
Java:				Mid-Java, Apr. 1-7, 1916: Cases,
Batavia.....	Apr. 13-19.....	2	1	8; deaths, 2. West Java, Apr.
Samarang.....	Apr. 1-7.....		1	13-19, 1916: Cases, 2; deaths, 1.
Mexico:				
Aguascalientes.....	June 12-25.....		26	
Guadalajara.....	June 11-17.....	4	1	
Vera Cruz.....	June 4-11.....		1	
Switzerland:				
Geneva.....	May 21-27.....	1		
Turkey in Asia:				
Adana.....	May 13.....			Present.
Haifa.....	Apr. 24-30.....	5	1	
Jaffa.....	Apr. 23-29.....			Do.
Mersina.....	May 7-13.....	5		
Tarsus.....	May 13.....			Do.

SANITARY LEGISLATION.

COURT DECISIONS.

NEBRASKA SUPREME COURT.

Regulations of Municipal Board of Health—Not Valid Outside of the Municipality— Nebraska Laws Construed.

STATE *v.* TEMPLE. (Mar. 4, 1916.)

The board of health of the city of St. Paul, Nebr., adopted a regulation making it unlawful to maintain a slaughterhouse outside the city but within 130 rods of the city limits. The court held that under the laws of Nebraska the regulation was not valid, as the power of the board of health did not extend beyond the city limits.

[156 Northwestern Reporter, 1063.]

SEDGWICK, J.: The board of health of the city of St. Paul adopted regulation No. 1, "to secure the general health and to prevent nuisance within the limits of said city, and providing penalties." Among many other things, this regulation recited:

It shall be unlawful for any person to erect, keep, or maintain any slaughterhouse within the limits of the city of St. Paul, or within one hundred and thirty (130) rods outside the city limits on the east, and 160 rods outside of the city in all other directions; and no slaughterhouse shall be kept or maintained within 20 rods of any dwelling house or public traveled road at any place within one mile of said city limits.

A complaint was filed in the police court of the city charging that this defendant did unlawfully maintain a slaughterhouse "within 130 rods of the east corporate line of said city, to wit, within 35 rods thereof." He was found guilty in the police court, and appealed to the district court for Howard County, where he was tried by the court without a jury and again found guilty and sentenced to pay a fine and the costs of prosecution. The defendant has brought the case to this court for review and assigns several grounds for reversal; the principal one being that the regulation of the board of health is void for want of jurisdiction or power to make it.

Any fair, reasonable doubt concerning the existence of power (of the city itself) is resolved by the courts against the corporation, and the power is denied. * * * These principles are of transcendent importance, and lie at the foundation of the law of municipal corporations. 1 Dillon, *Municipal Corporations* (4th Ed.), § 89.

A municipal corporation possesses only such powers as are expressly conferred upon it by statute, or are necessary to carry into effect some enumerated power. *State v. Irely*, 42 Neb. 186, 60 N. W. 601.

The prosecution relies upon sections 5006, 5015, 5017, 5106, Revised Statutes, 1913. Section 5006 provides:

The mayor shall have such jurisdiction as may be vested in him by ordinance, over all places within five miles of the corporate limits of the city, for the enforcement of any health or quarantine ordinance and regulation thereof, and shall have jurisdiction in all matters vested in him by ordinance, excepting taxation, within one-half mile of the corporate limits of said city.

The mayor and council enacted an ordinance that:

The mayor be and "he is hereby vested with jurisdiction and with authority over all places and territory within the limits of said city and within five miles thereof to enforce the rules, regulations, and ordinances of the board of health of said city, and the quarantine ordinance and regulations of said city, city council, and board of health."

(1949)

It seems to be contended that this ordinance is a recognition of the jurisdiction and power of the board of health to make the regulation in question, and would therefore give some force and effect to that regulation as an ordinance of the city. It is not necessary to determine in this case whether the mayor and council of a city of the second class having more than 1,000 and less than 5,000 inhabitants have jurisdiction by ordinance to prohibit slaughterhouses outside of the city limits and within five miles of the city. Whatever may be thought of the power of the mayor and council in that regard, it is manifest that this ordinance was not intended, and could not have the effect, to give vitality and force to the regulation of the board of health in the matter in question.

Section 5015, Revised Statutes, 1913, gives the mayor and council of the city power "to make regulations to prevent the introduction of contagious or infectious diseases into the city, to make quarantine laws for that purpose and to enforce the same within five miles of the city; to create and establish a board of health to consist of the mayor, who shall be chairman, the city physician, who shall be secretary, the president of the city council, and the marshal of such city." It then contains the provision:

A majority of such board shall constitute a quorum to enact ordinances for the enforcement of all rules, regulations, and orders of said board, and provide fines and punishments for the violation thereof.

There is no doubt that the legislature could authorize a municipal corporation to enact suitable ordinances for the government of the city and "provide fines and punishments for the violation thereof." It may well be doubted whether the legislature could confer such power on the board of health. However that may be, it is manifest that it is not the purpose of this section to confer such power as the board of health has undertaken to exercise in the regulation in question. The section relates to quarantine and the prevention of contagious and infectious diseases in the city. The legislature could not have intended to empower a board of health to define and provide punishment for crimes committed outside of the city. If such board could be given such powers and could exercise them outside of the city, by the same reasoning they could exercise them anywhere within five miles of the city limits—which, of course, was never intended by the legislature.

* * * * *

We do not mean to be understood as holding that the mayor and council of a city can not by ordinance prevent the maintenance of a slaughterhouse in the vicinity of a city of this class. That question is not involved in this case. The regulation of the board of health under which this defendant was prosecuted is invalid.

The judgment of the district court is reversed, and the cause dismissed.

Letton, J., concurs in conclusion; Rose, J., dissents.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

BIRMINGHAM, ALA.

Foodstuffs—Protection and Sale—Employees—Sanitary Regulation of Establishments. (Ord. 341-C, Jan. 26, 1916.)

SECTION 1. That every person, firm or corporation, who as owner or manager, keeps, maintains or operates any restaurant, lunch stand, café, dining room, ice-cream parlor, public or private market, stall, shop, store, storehouse, cold-storage plant, cart, wagon, or any other place in or from which meat, fish, oysters, birds, fowl, vegetables, fruit, milk, ices, beverages or any other provision intended for consumption by human beings is manufactured, held, kept, stored, or offered for sale, disposition, or other distribution as food for human beings, shall keep the same in a clean, sanitary, and healthful condition.

SEC. 2. That it shall be unlawful for any person, firm or corporation, maintaining, operating or managing any place of business as set forth in section 1 to suffer, permit or allow any employee, officer or agent employed therein or thereabout in the handling of any food product intended for human consumption, to be or remain in an insanitary, filthy or dirty condition either as to person or clothing while so employed or engaged in the handling of such products intended for human consumption.

SEC. 3. That it shall be unlawful to sell, dispose of, transport or deliver any meats, game, fish, vegetables, fruit or prepared food, exposed for sale in open receptacles or broken packages, unless the same shall be kept not less than 2 feet above the floor of the building, shop, booth, stall, or other place where the same is exposed for sale, and unless the same shall be protected in such manner as to prevent dust, flies, and vermin from coming in contact with the same.

SEC. 4. That it shall be unlawful to sell, expose for sale, offer for sale or other disposition any prepared food for human beings any cheese, candy, cooked meats, bread, cakes, figs, dates, raisins, mincemeat, or other food in broken packages, unless the same shall be kept or stored in closed glass cases or other suitable containers from which dust, dirt, flies, insects, and vermin are excluded.

SEC. 5. That it shall be unlawful to sell, expose for sale, to dispose of or deliver any sugar, honey, pickles, olives, sauerkraut, lard or any like products intended for human consumption, unless the receptacles in which such product is contained shall be kept covered, and it shall be unlawful to sell or expose for sale or to dispose of any berries, grapes, lettuce, celery, or other vegetables, which vegetables are intended to be eaten raw, unless the same shall while so exposed be protected from contamination from flies and dust. It shall be unlawful to expose or dispose for sale any food product intended for human consumption upon any box, table, shelf, or other structure on any street, sidewalk, alley, or public place, except in such places as have been or may hereafter be designated as public markets, and except in wagons or other vehicles from which foodstuffs are peddled by licensed peddlers, where license is required: *Provided, however,* That all foods so peddled shall be carefully covered with clean and sanitary covering and shall be protected from flies and dust.

SEC. 6. That it shall be unlawful to sell or offer for sale any contaminated, adulterated, or unfit food intended for human consumption or any food which has been exposed to dust, flies, or vermin in violation of the terms of this ordinance.

SEC. 7. That it shall be the duty of the health department of the city of Birmingham to seize all food sold, offered for sale, or exposed for sale in violation of the terms of this ordinance, and to give notice in writing to the owner or person in possession of such food so seized that the same has been seized, and it shall be the duty of said health officer to return to the recorder's court information, petition, or affidavit for the purpose of condemning said food, and the recorder shall thereupon make an order setting said cause for hearing and ordering notice of such petition to be given to the owner of the food so seized, or the person in possession where the owner is unknown, which notice shall be given by personal service upon such owner or person in possession, as the case may be, not less than one day prior to the hearing of such petition, and upon the hearing of said petition, if it shall appear that said food has been unlawfully exposed for sale or sold in violation of the terms of this ordinance, a judgment of condemnation shall be entered and it shall thereupon be the duty of the chief of police to destroy said food.

SEC. 8. That it shall be unlawful to keep, maintain, operate, or conduct any kitchen or any restaurant, café, lunch stand, or any candy factory or ice-cream factory or grocery store, fish market, meat market, bakery, or any other place where food, milk, ices, or beverages are manufactured, prepared, or served, unless all of the doors, windows, or other openings shall be fitted with proper screens covered with wire not coarser than 14-mesh wire gauze, and all such screen doors shall be so hanged as to open outward: *Provided, however,* That such screens may be omitted if electric fans are used, or effectually used, and provided such electric fans shall effectually prevent flies from coming into such place of business.

SEC. 9. That it shall be unlawful to cause, permit, or suffer any decayed food or meat or vegetable matter of any kind to remain in any receptacle wherein any fruits, meats, vegetables, or other food intended for human consumption is kept for sale or other disposition.

SEC. 10. That it shall be unlawful to operate, maintain, or conduct any business where the process of production, manufacture, packing, canning, selling, or disposing of food products for human consumption is conducted in any building, room, basement, unless the person so owning, conducting, managing, or operating said business shall provide or cause to be provided a sanitary toilet, which shall be located separate and apart from the room or rooms wherein such process of production, manufacture, packing, canning, selling, or disposition is conducted, and unless the floors of such toilet room shall be constructed of nonabsorbent material, and unless the floors thereof shall be cleaned daily.

SEC. 11. That all such toilet or toilets shall be furnished and provided with separate ventilating flues or pipes discharging into soil pipes or on the outside of the buildings in which said flues are situated.

SEC. 12. That it shall be unlawful for any person, firm, or corporation to operate, maintain, or conduct any business where food intended for human consumption is prepared, manufactured, canned, or sold, or otherwise disposed of, unless there shall be provided in such building a room or rooms with ample supply of running water and soap, and unless the operatives, clerks, and employees and all persons who handle material from which food is prepared, or handle the finished product, shall be required to keep themselves and their person and clothing in a thoroughly clean condition.

SEC. 13. That no cellar, basement, or room wholly or partly under ground shall be used as a bakery or in the preparation or serving of food for sale or other disposition, unless the floor, ceiling, and walls shall be constructed of tile, cement, or other material impervious to dampness or water, and unless such room or rooms or basement or cellar shall be provided with openings to the outer air and with proper ventilation, and unless the plumbing shall be maintained in a sanitary condition.

SEC. 14. That it shall be unlawful for any person, firm, or corporation to sell, dispose of, or to deliver any flour, meal, or other cereal products prepared for human

consumption, unless the same shall be stored or kept while awaiting sale in a dry, airy room or rooms, unless such cereals or cereal products are contained in wood, tin, or glass containers and stored not less than 8 inches above the floor.

SEC. 15. That it shall be unlawful to transport from one place to another along any street or highways in the city of Birmingham any meal, flour, cereal or cereal products contained in sacks and intended for human consumption, unless the same shall be wrapped with proper wrappings or covered with tarpaulin or canvas while being so transported.

SEC. 16. That it shall be unlawful for any person employed in any building wherein meal, flour, cereal, or cereal products are stored or kept for sale, or any person in charge of any shipment or delivery or transportation of any such goods to walk or sit upon any sack containing any such meal, flour, cereal, or cereal product.

SEC. 17. That it shall be unlawful for any person to be employed in any restaurant, café, dining room, lunch stand, or any other place where meat, fish, game, oysters, fowls, vegetables, prepared or unprepared, milk, fruits, ices, beverages, candy, or other confection are manufactured, kept, sold, or offered for sale or otherwise disposed of during the time a case of infectious or contagious disease exists at the place where such employee resides, or during the time that such place is quarantined or thereafter until the quarantine shall have been removed and such premises shall have been disinfected.

SEC. 18. That no person shall be employed in or about any such restaurant, café, dining room, or lunch room or any other place where meat, fish, game, oysters, fowl, vegetables, milk, fruits, ices, beverages, candy, or other confection are manufactured, kept, sold or offered for sale or otherwise disposed of for human consumption, at whose home there is a case of tuberculosis of the lungs, unless such person shall first obtain a certificate in writing from the health officer of the city of Birmingham certifying that all precautions are taken in the handling of such case of tuberculosis and that no infection therefrom will be spread.

SEC. 19. That it shall be unlawful for any person, firm, or corporation to employ any person suffering from tuberculosis of the lungs or any infectious or contagious disease externally visible, or not, or any skin or blood diseases in any place where meat, fish, oysters, fowls, fruits, prepared vegetables or unprepared vegetables, milk, ices, beverages, candy, or other confections are manufactured, stored, kept, sold or offered for sale.

SEC. 20. That it shall be unlawful for any person, firm, or corporation operating, managing, or in charge of any restaurant, café, lunch room, or dining room, ice cream parlor, bakery, cracker factory, or any other place where candy or confections, milk, ices, or beverages are manufactured, sold, or served or otherwise disposed of, to employ any person, unless such person shall procure from a reputable physician in the city of Birmingham at least once each year a certificate showing that he or she is free from infectious or contagious diseases, and provided that such certificate shall at all times be subject to the inspection of the health department, and provided further that such certificate shall be filed with the health department of the city of Birmingham for its approval or rejection before such person or employee is permitted to work in such place. That it shall be unlawful for any person to work in the places named in this section without first securing a certificate showing that such person is free from any infectious or contagious disease, and such certificate shall be renewed annually and shall be filed for record with the health department of the city of Birmingham.

SEC. 21. That it shall be unlawful for any person, firm, or corporation to permit, suffer, or allow any person, including the owner, proprietor, servant, agent, or employee, to live or sleep in any room or any bake shop or any kitchen, dining room, confectionery, creamery, or other place where food for human consumption is prepared, manufactured, served, sold, or otherwise disposed of.

SEC. 22. That it shall be unlawful to keep live chickens, ducks, turkeys, or other fowls in any cellar or basement underneath any grocery store, market, or other place where uncanned foods or foodstuffs intended for human consumption are kept, prepared, sold, offered for sale, or otherwise disposed of.

* * * * *

SEC. 25. That it shall be unlawful to use any grinder, cuttets, slicers, mixers, machine pans, or other tools or utensils used in and about the preparation or handling of meats, bread, cakes, candies, sirups, beverages, or other products used for human consumption, unless the same shall be thoroughly cleaned daily and shall be maintained in a sanitary condition and properly covered and protected while not in use.

SEC. 26. That it shall be unlawful to use any milk can, freezer, bottles, tools, machinery, implements, or containers used in handling or the preparation of milk or milk food products, unless the same shall have been sterilized by heat immediately after emptying or before being used, and shall be kept sterile from the time of sterilization until such milk or milk product shall be placed therein.

SEC. 27. That the power to enforce the provisions of this ordinance be, and the same is hereby, vested in the health officer of the city of Birmingham and his deputies and assistants and in a food inspector, when one shall have been appointed, and it shall be the duty of such persons to visit and inspect at frequent intervals every place where meat, game, fish, oysters, vegetables, fruits, or other foodstuffs, prepared or unprepared, and intended for human consumption, candies or other confections, milk, milk food products, ices, and beverages, and all carts, wagons, and other vehicles of venders and street hucksters in and from which any food for human beings is manufactured, kept, stored, prepared, or offered for sale or other disposition, and it shall be the duty of such officers to report to the health officer any violations of the terms or provisions of this ordinance: *Provided, however,* That all police officers of the city of Birmingham are hereby vested with full authority to enforce the provisions of this ordinance.

SEC. 28. That the health officer of the city of Birmingham and his deputies and assistants and the food inspector of the city of Birmingham shall have full power at all times to enter every building, room, basement, or cellar occupied or used, or which they have reasonable cause to believe is being used for the production for sale, manufacture for sale, storage, sale, distribution, or transportation of food for the purpose of inspecting the premises and the utensils, fixtures, furniture, and machineries used therein as aforesaid, and if, upon inspection, any food-producing or distributing establishment, conveyance, employee, operative, employer, clerk, driver, or other person is found to be violating any of the provisions of this ordinance, or if the production, preparation, manufacture, packing, storing, sale, distribution, or transportation of any such food products is being conducted in a manner detrimental to the health of the employees and operatives or injurious to the quality and food value of such food therein being produced, manufactured, packed, stored, sold, distributed or conveyed, the officer or inspector making such examination or inspection shall in writing report such conditions and violations to the health officer of the city of Birmingham, who shall thereupon issue an order or rule to the person or persons in authority or in charge or control of such place to show cause why the alleged condition or alleged violation should not be abated, and why such person, firm, or corporation should not be required to make such improvements as may be necessary to abate the same within a period of five days or such other reasonable time as may be required to abate the same, and such order shall be in writing and signed by the health officer and shall be served upon such person, firm, or corporation in charge or control of said place and return thereof made upon a copy of such order or rule, and a time and place shall be fixed in such order for the hearing of such cause as may be shown, and at the time and place so fixed the person therein named on whom said order shall be served,

may appear in person or by attorney before the health officer and show cause, if any there be, why he should not be commended to abate such conditions or to make such improvements and to conform to the provisions of this ordinance, and upon the failure of such person, firm, or corporation to show such cause it shall be the duty and the health officer shall have full power and authority to make a final order commanding such person to make said improvements within such reasonable time as in his discretion he deems proper, and unless such person, firm, or corporation shall make such improvements as required by such order within the time so limited, it shall be the duty of the health officer to institute a prosecution against the person for the violation of this ordinance and to take the necessary steps to revoke the license of such person until such improvements and repairs shall have been made.

SEC. 29. That the following shall be the meaning of the words herein used:

The words "ventilation of rooms" shall consist of an opening to the outer air at each end of such room, or such other adequate ventilation which shall be subject to the approval of the health officer, said openings to be so placed as to produce a free circulation of air in such room, and shall be subject to the approval of the health officer.

The word "food" as used herein shall include all articles used for food, drink, condiment, whether simple, mixed, or compound, and all substances or ingredients used in the preparation thereof and intended for human consumption.

The word "restaurant" shall be held to include all hotels and eating houses of every description.

The word "person" shall include corporations and managing servants, agents, or employees thereof.

SEC. 30. That all ordinances in conflict with this ordinance are hereby repealed.

SEC. 31. That if any section of this ordinance shall be declared unconstitutional, the same shall not affect any other section of this ordinance and shall not affect the validity of the same.

SEC. 32. That any person, firm, or corporation violating any of the provisions of this ordinance or any section of this ordinance shall be punished by a fine not exceeding \$100 and by imprisonment at hard labor not exceeding six months, one or both, and by revocation of any license granted by the city of Birmingham, in the discretion of the court trying such case.

Dairy Products—Sale of, from Premises Where Insanitary Conditions Exist Prohibited. (Ord. 348-C, Feb. 12, 1916.)

SECTION 1. That it shall be unlawful for any person, firm, or corporation to sell, offer for sale, or to distribute in the city of Birmingham any dairy products produced or in any manner prepared or handled on any premises within the State of Alabama having thereon or within a radius of 500 feet therefrom surface closets or privies not properly connected with the sanitary sewerage system, unless such closets or privies are so constructed as to safely take care of all human excrement, provided with self-closing doors, with drop-lid over hole in seat, with proper ventilation at back, with screened ventilators on each side at the bottom, with metal receptacle of adequate size to catch the human excrement, and with a closely fitting trapdoor at the back.

SEC. 2. That it shall be unlawful for any person, firm, or corporation to sell, offer for sale, or distribute in the city of Birmingham any dairy products produced or in any manner prepared or handled on any premises within the State of Alabama not provided with a sanitary closet properly connected with the sewerage system or with a surface closet or privy constructed and equipped in all respects as provided by section 1 of this ordinance.

SEC. 3. That it shall be unlawful for any person, firm, or corporation to sell, offer for sale, or distribute in the city of Birmingham any dairy products produced or in any man-

ner prepared or handled on any premises within the State of Alabama from which premises and the water supply thereof all accumulation of human excrement are not regularly carried to a safe distance and effectively destroyed.

SEC. 4. The failure or refusal on the part of any person, firm, or corporation producing, preparing, handling, or selling dairy products or offering the same for sale or other distribution in the city of Birmingham to see that his or its premises are provided, equipped, and kept as provided by this ordinance shall constitute sufficient grounds for the refusal by the meat and milk inspector of a permit for the sale or other distribution of such dairy products in this city, or for the revocation by the city commission after notice and hearing of any such permit already issued by such meat and milk inspector.

SEC. 5. Any person, firm, or corporation violating any section or provision of this ordinance shall upon conviction be punished within the limits of and as provided by section 1216 of the Code of Alabama.

Butter and Oleomargarine—Sale of. (Ord. 357-C, Mar. 15, 1916.)

SECTION 1. That it shall be unlawful for any person, firm, or corporation to sell, offer for sale, keep, or have in possession for sale, barter, exchange, give away, or otherwise dispose of any impure or adulterated butter, or butter not manufactured or made from fresh or ripened milk or cream. Butter shall be deemed impure or adulterated within the meaning of this section if it contains less than 82.5 per cent of butter fat, or if it is not free from other fats or other adulteration. But such butter may contain common salt and a small amount of vegetable coloring matter not deleterious to health.

SEC. 2. It shall be unlawful for any person, firm, or corporation to sell or offer for sale oleomargarine as or under the guise of butter or unless the same shall be plainly labeled as required by the Federal statutes. It shall be unlawful for any person, firm, or corporation to sell, or offer for sale, process or renovated butter, unless the same shall be labeled "Process butter," and shall contain at least 82.5 per cent butter fat, nor shall it be lawful to sell or offer for sale such process or renovated butter when the same contains more than 16 per cent moisture.

SEC. 3. All impure and adulterated butter, as well as all oleomargarine and process butter or renovated butter, that is sold, offered for sale, kept or had in possession in violation of this ordinance shall be confiscated by the meat and milk inspector, or his assistants, and the same shall be destroyed.

SEC. 4. Any person, firm, or corporation violating any section or provision of this ordinance shall upon conviction be punished within the limits of and as provided by section 1216 of the Code of Alabama.

SEC. 5. Section 339 of the city code is superseded by section 1 of this ordinance, but this ordinance shall not affect any prosecution for any offense which may have been committed prior to its adoption.

Pure-Food Inspector and Assistants—Appointment and Duties. (Ord. 349-C, Feb. 16, 1916.)

SECTION 1. That the office of pure-food inspector is hereby created with the duties and powers hereinafter set forth.

SEC. 2. That the health officer of the city of Birmingham is hereby authorized to nominate a pure-food inspector to be elected by the city commission and such number of deputy and assistant pure-food inspectors as may from time to time be authorized by resolution adopted by the city commission.

SEC. 3. That the said pure-food inspector and such assistants as may from time to time be appointed, shall hold office at the pleasure of the commission and shall receive such salary as may from time to time by resolution of the commission be fixed.

SEC. 4. That it shall be the duty of the pure-food inspector and the assistant pure-food inspectors to enforce obedience to the provisions of a certain ordinance adopted by the city commission on January 26, 1916, known as ordinance No. 341-C and entitled "An ordinance to further regulate the sale or other disposition of the foodstuffs and to establish sanitary regulations for all places in the city of Birmingham where food for human beings is manufactured, stored, kept, prepared, or offered for sale, or sold, or otherwise disposed of, and to provide penalties for the violation of the provisions of this ordinance, and to repeal all ordinances in conflict thereof [sic]," and perform such other duties as may from time to time be imposed.

SEC. 5. That the health officer of the city of Birmingham shall supervise and direct the work of the pure-food inspector and the assistant pure-food inspectors, and the said pure-food inspector and the assistant pure-food inspectors shall be under the direct control and supervision of the health officer of the city of Birmingham and subject to his orders and directions in the execution of the duties imposed upon them.

SEC. 6. That it shall be the duty of the pure-food inspector and assistant pure-food inspectors to report daily in writing to the health officer of the city, under such regulations as the health officer may prescribe, their findings in each individual inspection, and it shall be the duty of the health officer to cause said reports to be tabulated and recorded or kept on file in the office of the health department.

SEC. 7. It shall be the duty of the health officer, from time to time, as in his discretion may be necessary, to grade the several places of business, stores, factories, and merchants whose business is subject to the terms and conditions expressed in said ordinance No. 341-C and to publish a report in some daily newspaper published in the city of Birmingham of the grades so furnished to each of said persons, and a copy of such grade shall be furnished to such person and by him be placed in a conspicuous place in the store, house, or place of business of the person so graded.

SEC. 8. That such stationery supplies as may be necessary to carry on the work of the pure-food inspector and assistants shall be furnished by the city on requisition of the health officer, approved by the purchasing agent and the city commission.

BRIDGEPORT, CONN.

Refuse and Ashes—Transportation of—Coverings on Vehicles. (Reg. Bd. of H., Mar. 28, 1916.)

Every person or corporation who shall engage in the removing and carting of ashes or other refuse, shall cause each cart or other vehicle so used, to be covered at all times so as to prevent the ashes, papers and other refuse from falling from, or being blown out of, said cart or other vehicle; said cover to be of a substantial nature and if it be of material other than wood or iron, it shall be so made that it will overlap the four sides of said cart or other vehicle at least 12 inches when said cart or other vehicle is full, and shall be firmly fastened at the corners and sides.

This rule is to take effect on and after April 5, 1916.

Any person or corporation violating the above rule shall be fined not more than \$25.

CUMBERLAND, MD.

Common Towels—Prohibited in Public Places (Reg. Bd. of H., Apr. 7, 1916.)

Roller towels and other towels intended for use by more than one person is [sic] hereby prohibited in all public places.

The term "public places" shall be construed to mean hotels, restaurants, churches, railroad stations, barber shops, saloons, all manufacturing plants, stores, hospitals, theaters, and other public places of amusements, all public and private schools, public buildings, public institutions, and all other places visited by many persons and reasonably accessible to the public.

[These regulations were effective May 1, 1916.]

Domestic Animals—Keeping of. (Ord. 620, June 12, 1916.)

SEC. 20. (a). It shall be unlawful for any person, firm or corporation to keep or allow to be kept, upon any premises in his or their possession, within the limits of the city of Cumberland, any swine, except for immediate slaughter at an abattoir in the usual course of business.

(b) It shall be unlawful for any person, firm or corporation to keep or allow to be kept upon any premises in his or their possession, within the limits of the city of Cumberland, any cows, calves, heifers or bulls without first securing a permit from the board of health. Such permit shall expire on the 1st day of July annually and to be revoked by the board of health for cause. The board of health is hereby empowered to formulate rules and regulations governing the conditions under which the same shall be kept within the city limits.

(c) Any person, firm or corporation offending against any of the provisions of this ordinance, or any of the rules and regulations issued as above provided, shall, upon conviction be subject to a fine of not less than \$5 or more than \$25.

DAYTON, OHIO.**Leprosy—Quarantine—Control of. (Ord. 10164, Apr. 12, 1916.)**

SECTION 1. That whenever any person shall be found in the city of Dayton afflicted with the disease of leprosy such person shall be immediately put under quarantine in such place as shall be selected therefor by the health officer, and it shall be unlawful for any person to enter or leave such premises without the written consent of the health officer. It shall be the duty of such health officer to provide means of subsistence for such person and any one dependent upon him or her, if such person or persons are unable to provide for themselves. Such health officer shall recommend to the commission a place of quarantine for such person or persons and the commission shall provide means for the lease or purchase of such place if it shall approve such recommendation.

SEC. 2. The health officer is hereby authorized to make such rules and regulations as he thinks proper for the isolation, care, and the treatment of such person or persons, which rules and regulations the said health officer is hereby directed to report to this commission at the earliest possible date for its action in reference thereto.

SEC. 3. It shall be unlawful for any person, the owner of any premises occupied by any person so afflicted, to compel such person to vacate said premises without the written consent of the health officer first had.

SEC. 4. Any person who shall do any of the things hereby declared to be unlawful shall be guilty of a misdemeanor and upon conviction thereof shall be fined not more than \$500 or imprisoned in the workhouse of the city of Dayton for a period of not more than 6 months, or both.

EVERETT, WASH.**Certified Milk and Cream—Production, Care, and Sale—Certified Milk Commission. (Ord. 1710, Mar. 2, 1916.)**

SECTION 1. The term "certified milk," as used in this ordinance, shall be construed to mean and include milk drawn from animals free from disease and all conditions of whatever kind that might deteriorate the quality of the milk. Certified milk shall be produced from animals free from tuberculosis as shown by the tuberculin test or other accepted tests for the detection of tuberculosis. Certified milk shall not contain more than 10,000 germs, or bacteria, of all kinds to the cubic centimeter, with an acidity not higher than 0.2 per cent. Certified milk shall not contain less than 3.5 per cent butter fat and shall have a specific gravity not less than 1.029 or over 1.034,

nor shall the percentage of total solids be less than 12.5 per cent. Certified milk must be produced and handled under cleanly conditions not subjected to heat, bottled and sealed on the farm within two hours after being drawn from the animal, and maintained at a temperature not higher than 50° F. from 30 minutes after milking until delivered to the consumer, which delivery must be made within 24 hours from the time the milk is drawn and shall contain no adulterants of any kind and nothing added thereto or subtracted therefrom without the written consent of the certified milk commission of the city of Everett.

SEC. 2. The city health officer is hereby authorized and empowered and shall appoint a competent commission of three persons to be known as the certified milk commission of the city of Everett, at least two of whom shall be physicians, none of whom shall be financially interested in the production or sale of milk or dairy products, to direct under the law, and under such rules and regulations as the city health officer may prescribe, the production, handling, selling, and distribution of certified milk or certified cream. The members of the certified milk commission shall not be entitled to receive salary, or compensation for their services, other than their actual traveling expenses, incurred in the performance of their duties, to be audited and paid as other expenses of the department of health and sanitation are audited and paid.

SEC. 3. Upon the filing of an application with the secretary of the certified milk commission of the city of Everett by any person for permission to sell, offer for sale, or to dispose of milk or cream within the limits of the city of Everett under the name of and as certified milk or certified cream and if such application is accompanied by a certificate from a veterinarian designated by the city health officer of the city of Everett, or by a certificate satisfactory to the city health officer, showing all animals in said person's herd to be free from tuberculosis or other diseases of any kind whatsoever likely to deteriorate the quality of the milk and that tuberculosis-free cattle are marked, tagged, or branded in a manner satisfactory to the city health officer, and all reacting animals are marked, tagged, or branded in a manner satisfactory to the city health officer, it shall be the duty of the certified milk commission to supply such person with a copy of the rules and regulations for the production of certified milk and certified cream, and said person shall, for a period of two weeks deliver daily to the city health officer, at his offices in the city of Everett, Sundays excepted, a mixed sample of the milk or cream from the herd for which he is seeking certification to undergo examination by him. Providing the tests made of the milk or cream do show it to have conformed to the standard of certified milk or certified cream, and providing said person's dairy farm, dairy herd, utensils, and general equipment for the production of certified milk conform to the rules and regulations for the production of certified milk, then said certified milk commission shall issue to such person a certificate, setting forth the fact that his dairy farm, dairy herd, utensils, and equipment merit the approval of the certified milk commission. The certified milk commission shall furnish labels, or caps, at cost to be placed on and attached to each bottle containing certified milk or certified cream to be sold and advertised as herein provided bearing the words certified milk or certified cream, bottled

SEC. 4. No person selling, or offering for sale, milk not certified, shall use the word "certified" in such a way either upon advertisements or upon wagons, pails, bottles, labels, caps, or in any other manner so that thereby the public may be misled into the belief that such milk is that which is generally known and sold as certified milk. It shall be unlawful for any person to sell or dispose of certified milk or certified cream within the limits of the city of Everett without first procuring from the secretary of the certified milk commission a certificate setting forth the fact that said person has complied with the State law, ordinances, rules, and regulations governing the production, handling, and delivery of certified milk and certified cream. But nothing in this ordinance shall be construed to prevent a milk dealer from purchasing

certified milk or certified cream from an authorized certified milk or certified cream producer, handling and disposing of the same under the provisions of the State law, ordinances, rules, and regulations in effect. The producer, the wholesaler, and the retailer of certified milk and certified cream shall at least once a month notify the certified milk commission of the names and addresses of all persons to whom they are selling or delivering certified milk or certified cream: *Providing, however, That the retailers shall only so notify when such milk or cream is delivered to the homes of the consumers.* It shall be unlawful to open any bottle containing certified milk or certified cream before it reaches the consumer or to remove a milk bottle from a house where an infectious or contagious disease exists.

SEC. 5. The city health officer of the city of Everett is hereby authorized and empowered to, from time to time, as often as he shall deem it necessary either by himself, his assistants, or by the certified milk commission, visit and inspect all dairies having a certificate for producing certified milk, and may also take samples of said certified milk or certified cream either at said dairy or from any delivery wagon delivering the same in the city of Everett or from any depot, and make tests thereof, and in case the city health officer or the certified milk commission shall find that any such dairy is not being conducted in accordance with the provisions of this ordinance, or with the rules and regulations of the city health officer for the production of certified milk or certified cream, or that such certified milk or certified cream, so sampled and tested, is not of the standard hereinabove provided for certified milk or certified cream, the city health officer of the city of Everett or the certified milk commission may immediately revoke the permit issued for the production of certified milk or certified cream to said person, and notify said person in writing of such action; and it shall be the duty of the certified milk commission to notify all certified milk or certified cream customers of said revocation.

SEC. 6. The term "certified cream" as used in this ordinance shall be construed to mean and include cream produced from certified milk and shall be subject to the provisions of this ordinance and the rules and regulations prescribed by the city health officer governing the production, sale, handling, and distributing of certified milk and certified cream. Certified cream shall not contain over 50,000 germs or bacteria of all kinds to the cubic centimeter and shall not contain less than 25 per cent butter fat.

SEC. 7. Every producer or distributor of certified milk or certified cream shall, at the first appearance of any infectious or contagious disease in his household or among his employees, notify the city health officer immediately, in person or by telephone, to be followed at once by a report in writing. No person shall be allowed under any circumstances to assist in the production, handling, or distribution of certified milk or certified cream, who is suffering from any infectious or contagious disease or who is suffering from any symptoms indicating that such person may be suffering with any infectious or contagious disease. Any dairyman sick with an infectious or contagious disease or who may have within his household any one sick with an infectious or contagious disease shall at once cease all shipments of certified milk or certified cream until the city health officer of the city of Everett shall consent to the renewal of such shipments. It shall be the duty of the city health officer, after the reporting to him of any infectious or contagious disease, to immediately examine into conditions.

SEC. 8. The word "person" as used in this ordinance shall be construed to include and mean the word person, firm, association, copartnership, corporation, or individual. The singular shall be construed to mean and include the plural and the masculine the feminine.

SEC. 9. Any person violating the provisions of this ordinance shall be deemed guilty of misdemeanor and, upon conviction thereof, shall be fined in any sum not exceeding \$100 or imprisonment for a term not exceeding 30 days or to be both so fined and imprisoned.

FALL RIVER, MASS.**Tuberculosis Dispensary—Regulations Governing. (Reg. Bd. of H., May 9, 1916.)**

SECTION 1. The dispensary shall consist of two services, to be known, respectively, as (a) the medical and (b) visiting service.

SEC. 2. The medical service shall be under the direction of a physician and shall be conducted by him with such assistants and substitutes as may from time to time be appointed. The dispensary physician shall promptly attend all tuberculosis medical clinics at the dispensary building at the appointed hours and shall also visit patients at their homes whenever their condition is such as to require his services. Such clinics shall be open at 7 p. m. on Wednesdays and 11 a. m. on Saturdays, except holidays. Patients present at the clinics prior to the hours of 7.30 and 11.30, respectively, shall be entitled to examination before the close of the clinic; otherwise, their examinations may be postponed to a future date. All persons presenting themselves at the clinics shall be entitled to free examination and diagnosis and to free treatment thereafter unless it is apparent that they are financially capable of providing proper treatment at their own expense; and whenever a positive diagnosis is made of tuberculosis, the patient shall be entered and recorded as a dispensary patient, and the case reported to the board of health.

SEC. 3. If for any reason the physician or nurse is unable to attend the medical clinics at the appointed hour, the superintendent of municipal hospitals shall be notified; and if for any reason they are unable to attend patients at their homes when required, the board of health shall be notified; both notices to be given in time to provide proper substitutes. The superintendent of hospitals or the agent of the board of health, as the case may be, shall thereupon provide a substitute physician or nurse from a list approved by both boards.

SEC. 4. The attending physician shall make such investigation and examination of all persons coming to his attention as is necessary to determine whether or not such person is afflicted with tuberculosis, and, if the result of the diagnosis is positive, shall determine the stage of the disease. He shall record, or cause to be recorded, the results of such investigation and diagnosis upon the form provided for that purpose, together with all subsequent clinical records concerning the condition or treatment of the patient, and shall see that a proper record is made whenever the patient is discharged from the dispensary for any cause.

SEC. 5. The attending physician shall see that all patients examined by him with any probability of tuberculosis shall have a sputum examination; and in such cases in the event of a negative sputum, there shall be at least three successive examinations. If there are such examinations and sputum is still negative in any suspicious case, a dispensary physician or nurse shall personally collect a sample or samples from the patient and cause the same to be examined. All specimens must be presented promptly to the laboratory of the board of health and not later than 48 hours [sic] after their collection.

SEC. 6. Diseases other than tuberculosis discovered at the dispensary if dangerous to the public health shall be immediately reported to the board of health; other diseases shall be reported to the superintendent of hospitals.

SEC. 7. The dispensary nurse shall attend all tuberculosis clinics and render such assistance as may be required by the attending physician in the preparation, examination, and treatment of the patient. Whenever a person is admitted as a dispensary patient, the nurse shall visit the home of such patient, shall investigate all conditions affecting the health of the patient in the home or methods of life, shall aid and instruct the patient as to personal conduct and home conditions, and shall see that the conduct of such patient is such as not to endanger the patient or persons with whom the patient comes in contact. She shall continue such supervision and instruction until the

patient is discharged from the dispensary or until other proper care and supervision is provided satisfactory to the board of health.

She shall record on the form provided for that purpose, to be filed at the dispensary office, the information indicated therein with regard to the first visit; and on subsequent visits shall, at the time of the visit, record in a loose-leaf book, provided for that purpose, all conditions observed by her and all acts done by her affecting the patient with relation to the disease.

Whenever a patient dies, removes from the city, is transferred to a hospital, or for any other cause is no longer under the supervision of the nurse, she shall record the fact upon the card filed at the dispensary office.

In addition to her nursing duties she shall, by advice, counsel, and a general interest in the welfare of the patient and the conduct of the home, endeavor to maintain the public safety and improve or alleviate the condition of the patient.

SEC. 8. Nursing clinics may be established from time to time at the dispensary office, at such hours as may be approved by the board of hospital trustees and the board of health, for the purpose of investigating the condition and conduct of the patient and giving such instruction and advice as may be indicated. Whenever so required by the nurse, patients shall visit the dispensary office for the purpose of attending either the medical or nursing clinics or obtaining supplies.

SEC. 9. A clerk shall be in attendance at the dispensary office daily, except holidays, Sundays, and Saturdays, from 9 to 12 a. m. and from 1 to 5 p. m.; on Saturdays from 5 to 6 p. m.; and on Wednesdays at 7 p. m. during which hours the dispensary shall be open to tuberculosis patients for purposes of information or obtaining supplies.

SEC. 10. The clerk shall see that all records are properly filled out and filed, including the physician's and nurse's records, and shall keep a general card index arranged alphabetically, a street index, and all notices or correspondence relating to the patient. These latter shall be filed in a folder containing the physician's and nurse's records, numbered and referred to by the card index.

On the index card shall be recorded the name, age, residence, and occupation of the patient, the date of admission, the diagnosis, and the date and cause of discharge.

In case of the removal of a patient to another city or town, the clerk shall, on notification thereof, forward to the board of health of such city or town information of the removal on a form provided for that purpose.

The clerk shall prepare and forward to the proper authorities such reports and information as may be from time to time required, including monthly reports to the State department of health and the superintendent of hospitals, as indicated on forms provided for that purpose.

Whenever requested by the attending physician, the clerk shall obtain and record the personal and family history of an applicant for examination.

SEC. 11. All tuberculosis cases discharged from the local hospital or State tuberculosis sanatoria shall be considered and recorded as dispensary cases, and such supervision maintained over them as may be indicated.

SEC. 12. The service of the dispensary building shall be under the general supervision of the board of trustees of municipal hospitals and dispensaries, acting through its superintendent. All other service shall be under the general supervision and control of the board of health.

JACKSONVILLE, FLA.

Meat and Meat Products—Sale of—Slaughterhouses—Location, Construction, and Maintenance. (Ord. N-64, Apr. 6, 1916.)

SECTION 1. From and after October 15, 1916, no person shall sell or offer for sale or have on hand for the purpose of sale within the city of Jacksonville any meat or meat food product unless the same has been passed and bears the stamp of inspection provided for by the laws of the United States of America governing interstate shipments

of meat or meat food products or has passed and bears the stamp of inspection of the city inspector under the terms of this ordinance.

SEC. 2. The provisions of this ordinance with reference to the construction, equipment, management, and operation of abattoirs and slaughterhouses shall apply, except when herein otherwise provided, to all abattoirs or slaughterhouses now in construction or in operation, or that may hereafter be constructed or operated, in which animals of any description or kind are slaughtered for use as food within the limits of the city of Jacksonville, whether said abattoirs be situated within or without the limits of the city of Jacksonville; and from and after October 15, 1916, it shall be unlawful for any person, firm, corporation, association, butcher, vendor of meat, or any other person in any case, except when hereinafter otherwise provided, to have any animal slaughtered to be used as food or slaughtered to be exposed for sale as food or slaughtered to be sold for food, within the limits of the city of Jacksonville, at any abattoir or slaughterhouse or other place not constructed, equipped, managed, or operated in accordance with the provisions of this ordinance: *Provided, however*, That the provisions of this ordinance shall not apply to any abattoir or slaughterhouse while the same is operated under the supervision of the Bureau of Animal Industry of the Department of Agriculture of the United States of America, or to any animal slaughtered under the supervision of such bureau: *Provided, further*, That no meat or meat food produced from animals slaughtered in such establishments shall be exposed for sale as food or sold for food in the city of Jacksonville unless the same shall have been inspected and passed by said bureau and is so marked or stamped by it.

SEC. 3. Each abattoir or slaughterhouse or other place for the slaughter of animals at which animals are slaughtered for purposes of being used for food, exhibited for sale as food, or sold for use as food within the limits of the city of Jacksonville, in every case except when herein otherwise provided, shall be constructed in accordance with the following provisions:

The same shall consist of a substantial and suitable building, well lighted, containing a killing room, a chill room, a cold-storage and refrigerating room, a reduction plant, and suitable pens, chutes, etc., commensurate therewith, together with all knives, tools, cleavers, etc.

The killing room shall be adequate in size, and the floor of said killing room shall have a concrete base not less than 3 inches thick, together with a top layer of cement or other material approved by the city board of health not less than 1 inch thick, connected with a sewer, in accordance with the provisions of section 4 of this ordinance, and shall be constructed in such a manner as to secure perfect drainage; it shall be provided with hot and cold water, also tank for scalding animals, together with an ample supply of hose; it shall be provided with runways, windlasses, overhead trackage, and system of trolleys running from the killing rooms into and connecting with chill and cold-storage rooms, by which and upon which animals slaughtered can be raised, lowered, and carried from killing room to chill room and cold-storage rooms without handling same with hands; it shall be amply equipped with buckets, tubs, and other utensils and devices into which the blood, offal, and refuse shall be placed and immediately removed to the reduction plant without the necessity of handling with hands; the inside walls to a height of 6 feet from the floor shall be glazed tile, porcelain, or such other smooth and impervious material as shall be approved by the city board of health; above this wainscoting the walls and ceilings and partitions shall be smooth and of such material as to permit of frequent washing, and all apparatus, tools, knives, cleavers, etc., used in or about said building shall be kept perfectly clean; the killing room and every other room, except the cold-storage rooms, shall be provided with water, soap, clean towels, and cuspidors that will not readily upset for the use of employees working therein; there shall be further provided a water-closet and urinal for the use of employees in the proportion of one water-closet and one urinal to each 20 employees working in such abattoir; the water-closet shall be well

ventilated by outside windows, shall at all times be kept clean, shall not open directly into the killing room or other room where meats are handled, and shall be provided with a self-closing door.

There shall be provided a water-closet and dressing room for the city inspector, separate from that used by employees of the slaughterhouses. There shall also be provided an office or suitable space, with desk and record-filing accommodations for the city inspector, suitable for the adequate keeping of the records necessitated by the duties of his office. The chill room shall be of adequate size; the walls, partitions, and ceiling of said room shall be thoroughly insulated with approved material and equipped in such manner that all condensation shall take place above carcasses and be promptly trapped out of the building, thereby securing as far as practical dry refrigeration; said construction and equipment shall be such that the approximate temperature maintained shall be 40° F. It shall also be equipped with overhead trolleys and trackage, connected with the killing rooms and also with the cold-storage or refrigerating rooms, and same shall be sufficient in height and capacity to permit all animals slaughtered to be hung from the trolleys, and no animal or portion of same shall be placed on the floor or permitted to rest thereon, and all animals or food products placed therein shall be handled with the hands as little as possible.

Cold-storage and refrigerating room shall be of adequate size and shall be equipped with an adequate system of artificial lights; the walls, partitions, and ceiling of said room shall be thoroughly insulated with approved insulating material and constructed in such a manner as to produce dry refrigeration, and said construction and equipment shall be such that the approximate temperature to be maintained shall be 34° F. It shall also be connected with the killing room and chill room by overhead trackage and trolleys, which shall be sufficient in height, size, and capacity to permit all animals killed and stored therein to be hung from trolley, and all animals slaughtered shall be suspended from said trolley and no portion of same placed on the floor; the walls, partitions, and floor shall be kept perfectly clean.

The reduction plant shall be of adequate size and equipped with vacuum pumps, engines, and machinery of sufficient size and capacity to dispose of without odor all offal, blood, and residue resulting from the slaughtering of animals, and the products taken from said plant shall be finished products; the room in which tankage and tallow are removed from the reduction plant shall be of adequate size; and the floors shall have a concrete base not less than 3 inches thick, together with a top layer of cement or other material approved by the city board of health, not less than 1 inch thick, and connected with a sewer in accordance with the provisions of section 4 of this ordinance, and shall be supplied with water service in such manner as to secure perfect drainage. The floors of the room in which refuse is handled and placed in reduction plant shall be constructed so as to be water-tight, and shall be thoroughly treated with oil prior to its use, and shall be kept clean and in good sanitary condition, all offal and refuse from slaughtered animals to be reduced immediately after same are slaughtered.

All floors, walls, and roofs of slaughterhouses or abattoirs shall be of rat-proof construction; to this end the space between the walls shall be guarded against rats by $\frac{1}{2}$ -inch mesh galvanized wire screens at the top and at each floor; all sewer openings, air flues, and windows through which rats may enter shall be screened; all ventilators, windows, and doors shall be screened so as to prevent effectively the entrance of flies. No cattle pen, alleyways, sheds, or platforms shall have wooden floors, unless the same are supported on pilings of brick, concrete, or other masonry to a height of not less than 18 inches above the ground. All platforms shall be open on at least one side; no runways shall be constructed of wood, but shall be paved with brick, concrete, asphalt, or some other impervious material approved by the city board of health; such paving shall be laid only upon a solid fill of dirt, sand, or other suitable material. Plans for slaughterhouses or abattoirs shall be submitted to the city board

of health for approval. The killing room shall be entirely protected from view from any public street or alley, and no slaughtering of cattle or other animal shall be carried on in view of such public streets or alleys or from the ground of adjacent properties.

SEC. 4. Abattoirs or slaughterhouses where animals are slaughtered to be used as food, offered for sale, or sold for food within the limits of the city of Jacksonville in every case, except when herein otherwise provided, when located within the city limits of the city of Jacksonville, shall be located only at such places as permitted by the city board of health and shall be so located as to permit connection with the sewer system, water service, and electric-light service of the city of Jacksonville, and when located without the city limits of the city of Jacksonville shall be supplied with sewer, water, and lighting systems to be approved by the city board of health.

SEC. 5. All abattoirs or slaughterhouses in which animals are slaughtered to be used as food, exhibited for sale or sold for food in the city of Jacksonville, in every case, except as herein otherwise provided, shall be operated in accordance with the following provisions:

(a) No animal intended for slaughter shall remain on the premises or premises immediately adjoining or adjacent thereto to exceed 24 hours, nor shall any animal be slaughtered while overheated.

(b) All animals intended to be slaughtered at such abattoirs for use as food within the limits of the city of Jacksonville shall be inspected while alive and on foot, by the city inspector, in pens specially constructed for that purpose, which shall be well lighted, and all animals so inspected shall be so slaughtered at such abattoirs, within a reasonable time thereafter, and no such animal shall be there slaughtered that is not inspected by said city inspector. All animals condemned by the city inspector shall be permanently marked or tagged in such manner as shall be approved by the city board of health.

(c) Every animal slaughtered at such abattoir shall be inspected during the process of slaughtering by the said city inspector, who shall use such methods of inspection as are then employed by the Federal meat inspection service of the Bureau of Animal Industry of the United States Department of Agriculture.

(d) Every portion of any animal slaughtered or intended for food or a food product shall be inspected after slaughter by the city inspector and tagged, marked, or stamped by him in accordance with the regulations for such meat inspection as are then prescribed by the Bureau of Animal Industry of the United States Department of Agriculture, and a record of said live and post-mortem inspections, with the name of owner, kind of animal, and condition thereof shall be made by said city inspector, which record of inspection shall be entered upon his daily report, which shall be filed with the health officer each week.

(e) The offal, blood, and refuse from slaughtered animals or portions thereof condemned upon dead inspection by the city inspector shall be immediately placed in the reduction plant and destroyed under the direction of said inspector.

(f) It shall be the duty of the city inspector to see that all trucks, traps, and other receptacles, all chutes, platforms, racks, tables, etc., and all knives, saws, cleavers, and other tools, all utensils, machinery, and articles used in moving, handling, cutting, chopping, or other process, shall be thoroughly cleaned before using.

(g) Each employee, upon his employment, prior to entering upon his duties, and at any time thereafter that the city inspector has reason to suspect that such employee is affected with a communicable disease, shall be examined by a city physician of the city of Jacksonville, at the expense of the employee, at a price not to exceed \$1 per examination; and no person affected with tuberculosis or any other communicable disease shall be permitted to work in any of the departments where carcasses are dressed, meat is handled, or meat food products are prepared. The city physician making such examination shall report the result thereof to the city health officer, the city inspector, and to the manager of abattoir or slaughterhouse.

(h) All employees handling meat or meat food products in such abattoirs or slaughterhouses shall be clean and sanitary, and shall wear clean, washable clothing at all times during working hours, and shall cleanse their persons and change their clothing when directed so to do by the city inspector.

(i) No person shall expectorate or discharge from the human body, or any organ thereof, any matter whatsoever upon any floor or wall of any such abattoir or slaughterhouse or upon any article of furniture or equipment or upon any animal or product thereof within any such abattoir or slaughterhouse, except into receptacles provided for that purpose.

(j) All employees working or employed where carcasses are dressed, or meat food products are stored, placed, handled, or prepared shall thoroughly wash their hands with soap and water after visiting the toilet room and before resuming their employment.

(k) The rooms in which meat or meat food products are prepared, stored, packed or otherwise handled shall be free from odors from toilet rooms, catch basins, tank rooms, etc., and shall be kept free from flies and other vermin by screening and such other methods as prescribed by the city board of health.

(l) Butchers who dress or handle diseased carcasses or parts shall cleanse their hands of all grease and then immerse them in a disinfectant prescribed by the city board of health and rinse them in clear water before dressing or handling carcasses. All butcher's implements used in dressing diseased carcasses shall be sterilized either in boiling water or by immersion in a disinfectant prescribed by the city board of health, followed by rinsing in clear water, and facilities for same shall be provided.

(m) No meat or meat food products shall be permitted to fall on floors, and, in the event of it having so fallen, the soiled portion shall be removed and condemned.

(n) Carcasses shall not be inflated with air from the mouth, and no inflation except by mechanical means shall be allowed. Carcasses shall not be dressed with skewers, knives, etc., that have been held in the mouth. Spitting on whetstones or steels when sharpening knives is prohibited.

(o) Only good, clean water shall be used in the preparation of carcasses, parts of meat or meat food products, and no practice or method of handling meat or meat food products prohibited by the regulations of the Bureau of Animal Industry of the United States Department of Agriculture shall be permitted in any department of any such abattoir or slaughterhouse.

(p) Where an animal or any part thereof is condemned by the city inspector after slaughter, such animal, or so much thereof as shall have been condemned, shall be immediately rendered in the reduction plant, and notice to that effect given to owner, who shall be paid by the abattoir the value of the tankage and the tallow derived therefrom, less the cost of rendering same.

(q) Each animal that is slaughtered and passed shall be required to remain in the chill and refrigerating room at least 18 hours before same is delivered to owner or used for food or offered for sale as food.

(r) It shall be unlawful for any person owning, managing, or employed in any slaughterhouse, abattoir, cold-storage plant, meat market or other place in which meats are dressed, prepared, stored, sold, held for sale, or offered for sale, or exposed for sale in the city of Jacksonville, to add to such meat any substance which lessens its wholesomeness, or any drug, chemical, dye, or preservative, or other substance, except that there may be added for the curing of meat or meat food products, common salt, sugar, wood-smoke, vinegar, pure spices, and saltpeter: *Provided*, That no meats to which saltpeter has been added shall be sold, held for sale, or offered for sale in the city of Jacksonville, as fresh meat.

(s) Wagons in which meat or meat food products are delivered shall be so constructed and covered that the contents shall be kept clean and be completely protected from dirt, dust, and insects of every description.

(t) The managers of all abattoirs and slaughterhouses operating under this ordinance, shall notify the said city inspector when his services are required in ample time to enable him to prepare for and make an inspection.

(u) It shall be the duty of the city inspector to see that all provisions of this section are duly observed.

(v) No children under 15 years of age, and no dogs, cats, fowls, or other domestic animals, shall, at any time, be allowed within the premises of any such abattoir or slaughterhouse.

(w) No horses, mules, or asses shall be slaughtered for food for use in the city of Jacksonville, and the keeping or selling of the flesh of horses, mules, or asses for food in the city of Jacksonville is prohibited.

SEC. 6. No animal shall be slaughtered for food for use in the city of Jacksonville within 15 days after parturition and no live stock too young and immature to produce wholesome meat, especially unborn or stillborn animals and calves weighing less than 45 pounds dressed (bobbied), pigs weighing less than 10 pounds dressed, and lambs and kids weighing less than 12 pounds dressed shall be slaughtered for food or sold or exposed for sale as food in the city of Jacksonville.

SEC. 7. Where an animal, upon live inspection, shows inconclusive evidence of disease, or where the inspector has reason to suspect disease, the inspector shall notify the owner to that effect before permitting such animal to be slaughtered, and any such animal, and likewise any animal that, upon live inspection, has been condemned as unfit for slaughter for food, may, at the option of the owner, be withdrawn from such establishment before slaughter, after being permanently marked or tagged by said inspector, for further care, treatment, and observation by the owner: *Provided, however,* That it shall be unlawful for any owner of any animal so withdrawn to sell the same or to permit the same to be sold to be slaughtered for food to be sold in the city of Jacksonville until that animal shall have been inspected and passed by the city inspector.

SEC. 8. Where any animal at the time of post-mortem inspection shows inconclusive evidence of disease, or where the inspector suspects disease therein, the owner or person in charge thereof shall be notified, and the slaughterhouse or abattoir where same is killed shall retain the head, tail, gall, and the entire viscera in such manner as to disclose their identity until after the post-mortem inspection has been completed, so that such animal may be identified and its carcass condemned if unfit for food.

SEC. 9. The pens or yards in connection with any slaughterhouse or abattoir where animals are slaughtered for food for use in the city of Jacksonville shall be so graded as to permit of rapid and complete drainage, and all such pens or yards shall be paved with vitrified brick and concrete, with concrete and cement surface or other impervious material, which shall be approved by the city board of health, and the manure or droppings from such animals held in such pens or yards shall be removed therefrom daily and disposed of in such manner as shall be approved by the city board of health.

SEC. 10. Every slaughterhouse or abattoir operating under the provisions of this ordinance shall slaughter for the public without discrimination, and the charge for slaughtering of live stock, chilling, and for all other service except cold storage shall be uniform for all persons making application for the slaughtering of animals permitted to be slaughtered for food under this ordinance. The maximum price for slaughtering and chilling shall be \$1.75 for beeves and 50 cents each for hogs, calves, sheep, and goats, but in addition to the above charges the abattoir shall retain for its own use all the offal of each animal slaughtered by it except the hide, heart, liver, tongue, and brains: *Provided, however,* That when any animal is condemned by the city inspector upon post-mortem inspection the fee for all services rendered by such abattoir shall not exceed 75 cents for beeves and 30 cents for smaller animals. No fee or charges

other than those hereinabove specified shall be made or charged against the owner of any animal brought for slaughter to any abattoir operated under this ordinance. It shall be the duty of the owners or managers of each slaughterhouse to publish once a month in the daily papers the rates for these services.

SEC. 11. Every abattoir or slaughterhouse shall be so constructed, maintained, and operated as to prevent any nuisance feature arising from the construction, maintenance, or operation thereof.

SEC. 12. (a) When any farmer residing in the State of Florida shall have killed upon his own farm any cattle, sheep, swine, or goats actually raised by him, which have not theretofore been condemned by the city inspector, it shall be lawful for him to bring or ship the carcasses of such animals to the city of Jacksonville so wrapped as to effectually exclude all dirt, dust, and insects of every character, with the heart, liver, lungs, and spleen retained in place by their natural attachments, such carcasses there to be sold if found to be fit for human food upon the post-mortem inspection hereinafter provided.

When any such carcass is shipped intrastate to said city by common carrier such inspection shall be made at the depot of said carrier. When any such carcass is brought to the city of Jacksonville other than by shipment by common carrier such inspection shall be made at some convenient place in said city, to be designated by the city board of health, where said carcass shall be taken by the owners for that purpose. Such carcasses shall be inspected, tagged, marked, or stamped by the city inspector in accordance with paragraph *d*, section 4 of this ordinance, and if said carcass or any part thereof shall be found on such inspection to be unfit for human food, because of disease, improper or insanitary handling or transportation before or after slaughter, or for any other cause, said carcass or so much thereof as is found to be unfit for human food shall be condemned forthwith by said inspector and so marked by him, and forthwith shall be sprayed by him with kerosene and shall either be returned to the owner or be sent by the city inspector at the cost of the owner to any one of the abattoirs then operating under this ordinance, and such abattoir shall pay the owner thereof the value thereof for tankage, less the cost of rendering the same and less 10 per cent of the gross value thereof as profit on such transaction. For the purposes of this section every animal that has been owned or kept by a farmer on his farm for one month next preceding the date of its slaughter shall be deemed to have been raised by such farmer.

Every such animal when offered for inspection by a farmer as having been raised and slaughtered on his farm shall be accompanied by a certificate made by such farmer or by his authorized agent in the following form, viz:

Date.....

I hereby certify that the following carcasses hereby offered for inspection are from animals that were slaughtered by me on my farm and that said animals were owned and kept by me on my said farm for three months next preceding date of slaughter and that said animals at the time of slaughter appeared to be in a sound and healthy condition and that said carcasses contain no preservatives or coloring matter or other substance prohibited by the laws of the State of Florida, or the laws of the United States, or the regulations of the United States Department of Agriculture.

Kind of animal.

Amount of weight.

.....
.....
.....

Signature of shipper.....

Such certificates shall be printed in blank by the city board of health and furnished through said inspector and otherwise to all farmers requesting same. Each certificate accompanying such carcasses presented for inspection hereunder shall be retained by the inspector for one year from the date thereof.

The signing of such certificate containing a false statement shall be deemed to be a violation of this ordinance and shall subject the person signing the same to the penalties hereinafter prescribed for violation of this ordinance.

(b) It shall be lawful for any person or persons to sell within the city of Jacksonville meat and meat food products that bear the stamp of inspection and approval of any duly constituted inspector of any municipality of the State of Florida that maintains methods and standards of inspection before and after slaughter and methods and standards of handling meat and meat food products that are approved by the city board of health of the said city of Jacksonville: *Provided*, That such meats or meat food products shall be transported to said city of Jacksonville so wrapped as to wholly exclude dirt, dust, and insects: *And provided further*, That before being offered for sale in the city of Jacksonville such meat or meat food products are inspected by the city inspector of the city of Jacksonville and found by him to be in clean, sound, and wholesome condition and fit for human food and are so stamped or marked by him. If, upon such inspection said meat or meat food products shall be found by said inspector to be in an unclean or unsound or unwholesome condition and unfit for human food, they shall be condemned and so marked by said inspector and disposed of in the manner hereinabove provided for the disposition of the meat of farm-killed animals that have been condemned by said inspector.

(c) It shall be the duty of the city inspector to visit the depot of each common carrier doing business in the city of Jacksonville once each day for the purpose of inspecting all fresh meats and meat food products shipped from points within the State of Florida to the city of Jacksonville, and it shall be the duty of each of said carriers to notify the said inspector by telephone promptly as such shipments arrive, and it shall be unlawful for any common carrier doing business in said city of Jacksonville to surrender to any person whomsoever other than the city inspector any fresh meat consigned intrastate to any consignee within the city of Jacksonville before the same shall have been inspected by the city inspector.

(d) All abattoirs and slaughterhouses operating under this ordinance shall maintain adequate public cold-storage rooms for meat and meat food products shipped or brought to the city of Jacksonville to be there sold under the terms of this section, and the maximum charge for so storing such meat and meat food products for each day of 24 hours or fraction thereof shall be as follows, viz:

For cattle weighing, dressed, 400 pounds or less the sum of 60 cents for the first day so stored and 10 cents for every day thereafter.

For cattle weighing, dressed, more than 400 pounds and not more than 500 pounds 75 cents for the first day so stored and 12½ cents for every day thereafter.

For cattle weighing, dressed, more than 500 and not more than 600 pounds 90 cents for the first day so stored and 15 cents for every day thereafter.

For swine, sheep, calves, and goats weighing, dressed, 100 pounds or less the sum of 25 cents for the first day and 3 cents for every day thereafter.

For swine, sheep, calves, and goats weighing over 100 pounds, dressed, the sum of 25 cents for the first day and 5 cents for every day thereafter.

SEC. 13. The provisions of this ordinance shall not apply to any meats or meat food products that have been subjected to any process of cure for more than 10 days before the same are offered for sale in the city of Jacksonville.

SEC. 14. It shall be unlawful for the city inspector to affix his stamp of approval upon any meat or meat food products except as authorized by the terms of this ordinance.

SEC. 15. It shall be unlawful for any person other than the city inspector to affix any stamp, tag, or other insignia of the city inspector upon any meat or meat food products.

SEC. 16. Each abattoir and slaughterhouse shall provide a suitable locker in a convenient part of its establishment for the storage of the stamps, tags, and other para-

phernalia of office of the city inspector, and it shall be unlawful for any person other than said city inspector to open or enter any such locker.

SEC. 17. The city inspector referred to in this ordinance shall be a veterinary surgeon who shall have graduated from a reputable school of veterinary medicine and who is eligible to the civil service examination of the Bureau of Animal Industry of the United States Department of Agriculture, and shall be a qualified voter of the city of Jacksonville. He shall be appointed by and hold office during the pleasure of the city board of health of the city of Jacksonville. His sole compensation shall be the inspection fees hereinafter mentioned, which shall be paid at the time and in the manner hereinafter provided, viz:

(a) When rendering inspection service in the public abattoirs or slaughterhouses operating under this ordinance said city inspector shall charge said abattoir or slaughterhouse the following inspection fees, viz:

For each beef animal inspected the sum of 15 cents and for each smaller animal inspected the sum of 5 cents.

Said fees shall cover both live and post mortem inspections, but no reduction shall be made in any fee because the animal inspected was condemned on live or post-mortem inspection.

All such inspection fees shall be paid by said abattoir or slaughterhouse in the manner and at the times hereinafter provided; but the abattoir or slaughterhouse shall require the owner of every animal condemned on live inspection before slaughter, or withdrawn by the owner after live inspection, but before slaughter to pay to said abattoir or slaughterhouse the inspection fee incurred thereon before surrendering such animal to such owner.

It shall be the duty of the owner of every such public abattoir or slaughterhouse to prepare, certify, and deliver to the city treasurer of the city of Jacksonville on the first day of each month a statement showing the number and kind of animals inspected and passed and the number and kind of animals inspected and condemned in his establishment during the previous month, and to pay to the treasurer at the time of the delivery to him of said statement the total sums shown to be due by said establishment for inspection fees for the period thereby covered, and as soon as said city inspector shall have approved said statement as correct said treasurer shall make and deliver to said inspector a voucher for said sum.

(b) Said city inspector when rendering the inspection service provided for in paragraph (a) section 12 of this ordinance in the inspection of the carcass and organs of farm-slaughtered animals shall be paid at the time of making such inspection, the following fee, viz:

For each carcass of beef inspected by him the sum of 15 cents and for the carcass of each smaller animal inspected by him the sum of 5 cents, said inspection fees to be paid by the consignees of such carcasses when same are shipped to the city of Jacksonville by common carrier, and to be paid by the owners of such carcasses when otherwise brought to the said city.

(c) Said city inspector when rendering the inspection service provided for in paragraph (b) section 12 of this ordinance in the inspection of meats and meat food products that bear the stamp of inspection and approval of certain other municipalities of the State of Florida shall be paid at the time of making such inspection the following fees, viz:

For each quarter of beef inspected by him the sum of 5 cents and for each carcass of smaller animal the sum of 5 cents, for cut meats and all other meat-food products the sum of 5 cents per hundredweight with a minimum charge of 15 cents for each shipment inspected.

The inspection fees provided for in paragraphs (b) and (c) of this section shall be paid to and retained by the city inspector, who shall give a receipt therefor and retain a copy of such receipt as a permanent part of his records, and said inspector shall file

with the city treasurer on the first day of each month a statement showing in detail the amount of the inspection fees received by him under paragraphs (b) and (c) of this section during the previous month.

SEC. 18. The city inspector may employ one or more deputies who shall be approved by the board of health and who shall be paid by the city inspector for each beef animal inspected the sum of 15 cents and for each small animal inspected the sum of 5 cents, and who after being approved by the city board of health, but not before, may perform all the functions of city inspector: *Provided, however,* That no person shall be appointed deputy inspector who is not qualified under this ordinance to be appointed to the office of city inspector.

SEC. 19. It shall be unlawful for said city inspector or any deputy to ask, charge, or take any fee or other thing of value for inspection of animals or meats for food except as hereinabove allowed.

SEC. 20. The city board of health shall make such reasonable rules and regulations and print and distribute such printed forms as shall be necessary to carry out the provisions of this ordinance.

SEC. 21. Any person, firm, or corporation who violates, disobeys, omits, neglects, or refuses to comply with any of the provisions of this ordinance shall upon conviction be punished by a fine of not more than \$50 or by imprisonment for not more than 30 days for the first offense, and for the second offense by a fine of not less than \$25 nor more than \$100, or by imprisonment for not exceeding 60 days.

SEC. 22. It shall be the duty of the city board of health, through its officers and inspectors, to enforce this ordinance.

SEC. 23. All ordinances, or parts of ordinances, in conflict with this ordinance shall be, and the same are hereby, repealed.

SEC. 24. This ordinance shall take effect at the beginning of day on October 16, 1916.

KNOXVILLE, TENN.

Tuberculosis—Notification of Cases—Disinfection—Control of. (Ord. 192, May 2, 1916.)

SECTION 1. That tuberculosis is hereby declared to be an infectious and communicable disease, dangerous to the public health. It shall be the duty of every practicing physician attending a person known by him to have tuberculosis and residing or employed in the city of Knoxville, to report to the department of health, by telephone, in person, or in writing such fact, together with such additional data as shall be required in the blank form for such reports to be furnished as hereinafter provided. It shall also be the duty of the chief officer having charge for the time being of any hospital, asylum, dispensary, or other similar public or private institution of the city of Knoxville to make similar report. If there be no physician in attendance such report shall be made by the relatives of the person afflicted, or by the head of the house in which such case resides. It shall be the duty of every authorized school physician to make similar report of every scholar, teacher, janitor, or other employee having tuberculosis who comes under his observation in the performance of his duties in connection with the medical inspecting of schools. Such reports shall be made to the office of the department of health within 48 hours after the knowledge of the existence of such case is obtained.

SEC. 2. That it shall be the duty of the director of the department of health to prepare or cause to be prepared a blank form upon which such reports shall be made, such form shall show the name, age, sex, color, social condition, occupation, place of employment, previous residence, and present address of the individual having tuberculosis, together with such information regarding the type, location, and stage of the tubercular infection, as may be required.

SEC. 3. That it shall be the duty of the registrar of vital statistics of the city of Knoxville to report promptly to the department of health the name and address of every person reported to him as having died from tuberculosis. In the event of the death of a person from tuberculosis it shall be the duty of the attending physician to notify the department of health of such death, together with a statement of the cause thereof within 24 hours after death. In the event that no physician is in attendance the person in charge of the remains shall immediately report such death to the department of health.

SEC. 4. That upon the request of any physician, or by the authorities of any hospital or dispensary, the director of the department of health is authorized and instructed to make or cause to be made a microscopical examination of the sputum delivered to the department of health as that of a person having symptoms of tuberculosis, and which sputum shall be forwarded to the department in a package supplied by the said department of health, and accompanied by a blank form giving the name, address, and such additional data regarding the case as the department of health shall incorporate in said form.

SEC. 5. That the director of the department of health shall cause all reports made in accordance with the provisions of section 1 of this ordinance, and also the results of all examinations showing the presence of tubercle bacilli, made in accordance with the provisions of section 4, to be recorded in a register, of which he shall be the custodian. Such register shall not be open to inspection by other than the health authorities of the city of Knoxville, and the said authorities shall not permit any such report of record to be divulged as to disclose the identity of the person to whom it relates, except as may be necessary to carry into effect the provisions of this ordinance.

SEC. 6. That in case of the vacating of any apartment or premises by the death or removal therefrom of a person having tuberculosis, the attending physician, or if there be no such physician, or, if such physician be absent, the owner, lessee, occupant, or other person having charge of the said apartments or premises, if he knows, or has been notified that such deceased person, or person who has removed therefrom, had tuberculosis, shall notify the department of health within 24 hours thereafter, and such apartments and premises shall not again be occupied until duly disinfected, cleansed, or renovated by the department of health, in accordance with methods indorsed and recommended by them.

When notified of the vacating of any apartment or premises, as provided in this section, the director of the department of health shall cause the said apartment or premises to be visited, and shall order and direct that except for cleansing or disinfection, no infected article shall be removed therefrom until properly and suitably cleansed and disinfected, and said director of the department of health shall determine the manner in which such disinfection, cleansing, or renovating shall be performed in order that they may be rendered safe and suitable for occupancy. Should it be determined that disinfection is sufficient to render them safe and suitable for occupancy, such apartment or premises, together with all infected articles therein, shall immediately be disinfected at public expense or, if the owner prefers, at the owner's expense, to the satisfaction of the health authorities: *Provided, however,* Should it be determined that such apartment or premises are in need of thorough cleansing and renovation, a notice in writing shall be served upon the owner or agent of said apartment or premises, and said owner or agent shall thereupon proceed to the cleansing or renovation of such apartment or premises in accordance with instruction from the department of health, and such cleansing or renovating shall be done at the expense of the owner or agent.

In case the orders or directions of the director of the department of health requiring the disinfection, cleansing, or renovating of any apartment or premises or any articles therein, as hereinbefore provided, shall not be complied with within 72 hours after

such orders or directions shall be given, the said director shall cause to be placed upon the door of the infected apartment or premises a placard in words and form substantially as follows:

"Tuberculosis is a communicable disease. These apartments have been occupied by a consumptive and may be infected. They must not be occupied until the order of the department of health directing their disinfection or renovating has been complied with. This notice must not be removed under penalty of the law, except by a duty authorized official of the department of health."

SEC. 7. That it shall be unlawful for any superintendent, principal, trustee, or other employer to employ or keep employed in or about any public or private school or teaching institution in the city of Knoxville any teacher, janitor, employee, or other person who is suffering from tuberculosis, except by written permit from the department of health.

When such case is brought to the notice of the department of health it shall be the duty of the director to demand of the said teacher or person so suspected a certificate of health from a competent physician and acceptable to the said director. Should such a teacher or employee refuse to submit to an examination or to furnish such certificate, the trustees or person in authority shall dismiss such suspected person forthwith.

SEC. 8. That any person having tuberculosis who shall dispose of his sputum, saliva, or any other body secretion or excretion so as to cause offense or danger to any person or persons occupying the same room or apartment, house, part of house, or premises, or adjoining premises, shall, on complaint of any person or persons subjected to such offense or danger, be deemed guilty of committing a nuisance, and any person subjected to such a nuisance may make complaint in person or in writing to the department of health. Upon the receipt of such complaint the director of the department of health shall make or cause to be made an investigation, and if it appear that the nuisance complained of is such as to cause offense or danger to any person occupying the same room, apartment, house, or part of house, or premises, or adjoining premises, he shall serve notice upon the person so complained of, reciting the alleged cause of offense or danger and requiring him to dispose of his sputum, saliva, or other body secretions or excretions in such manner as to remove all reasonable cause of offense or danger. Any person failing or refusing to comply with such orders of the department of health, requiring him to cease to commit such nuisance, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished as herein-after provided.

SEC. 9. That any person, firm, or corporation who violates this ordinance, or any of its provisions, shall be deemed guilty of a misdemeanor, and shall, upon conviction, be fined in a sum not less than \$5 nor more than \$50 for each offense.